Introduction

For my sabbatical, I focused on birds and their behavior at a local preserve during the Fall 2016. The project was within my teaching discipline but focused on an area of biology that is not my strength. My educational preparation and teaching focus are within cellular and molecular biology, and microbiology. My research background is in experimental work at the lab bench. My organismic biology preparation is thus not strong; I have never carried out behavioral studies, nor have I participated in field work. The independent study allowed me to focus on these activities. The original proposal was to evaluate the consequences of the 2015/2016 El Niño on selected Madrona Marsh Preserve (MMP) bird species, but the expected heavy rains did not materialize. The alternate plan called for a comparative analysis of bird behavior from early-to-late fall. My sabbatical project consisted of two components. The first component involved taking an ornithology course through UCLA Extension that covered basic bird identification, behavior, and ecology. Field trips and field note preparation were integral components of the course. The *Autumn Birds of Southern California* description and transcript are attached at the end of this report. The second component focused on field work at the preserve. The study was purely observational. Various environmental parameters were measured to determine which, if any, influenced bird behavior. Permission to access the study locale was granted by Ms. Tracy Drake, Naturalist and Manager of the preserve. We spoke periodically throughout the fall on the progress of my observations.

Materials and Methods

Materials: Nikon Aculon A211 10x42 binocular, Ambient Weather WM-5 (portable weather station), Garmin eTrex10, Canon EOS 70D camera with an EF 70-200 mm f/4 IS USM lens, iBird Explorer Pro2 Kindle application (for review of vocalizations in the field), various field guides (listed in references), twenty-four years of MMP (1992-2015) data *via* Excel spreadsheets, and a notebook for field notes.

Methods: The Madrona Marsh is classified as a vernal marsh, a marsh that fills in the rainy season during the winter and spring, and dries out in the summer into fall. Five locations within the 42-acre marsh were selected for bird observations from September 27th through December 20th, 2016, and the locations were referred to numerically as Locations 1-5. The locations were selected for variability in habitat and expected minimal disturbance by preserve personnel and visitors. The locations and coordinates are noted in Figure 1 (only one coordinate measurement was taken at each location for an approximation of location; waypoint averaging with multiple measurements for greater accuracy was not performed as the coordinate for each location

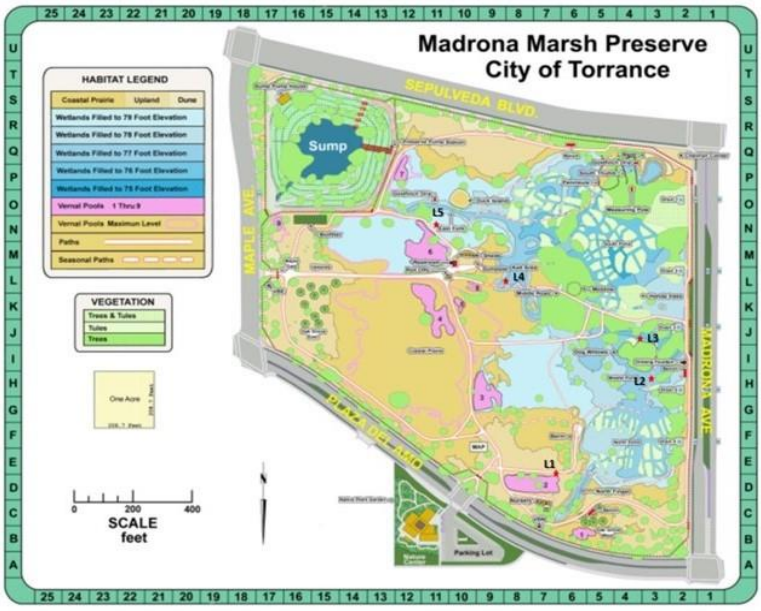

Figure 1 N33°49.692′ W118°20.620′ Location 1
N33°49.645′ W118°20.666′ Location 2
N33°49.621′ W118°20.659′ Location 3
N33°49.588′ W118°20.571′ Location 4
N33°49.554′ W118°20.519′ Location 5

was generally within 10-15 ft from where observations were made). The observation period was 1 hr at Location 1 with a 0.5 hr observation period for each of Locations 2-5. The observations began within 0.5 hr of sunrise and every attempt was made to start at about the same time at each location (the time change in November was taken into account). Observations at the furthest site from the entrance (Location 5) were completed approximately one hour after the preserve opened to the general public at 10 am. The total distance traveled was 0.3 mile from Location 1-5. Incidental observations between locations were made as well. The six species of focus were as follows (common names, alphabetically): Black Phoebe, Bushtit, California Towhee, Northern Flicker, White-crowned Sparrow, and Yellow-rumped Warbler. These birds are found at the marsh in the fall and they are readily identifiable. Their characteristic field marks and vocalizations were used for identification and served as distinguishing features from similar species. Evaluation of bird skins at the Natural History Museum of Los Angeles County was helpful in distinguishing immature vs. mature (e.g. White-crowned Sparrow), male vs. female (e.g. Northern Flicker), and variations in plumage (e.g. Yellow-rumped Warbler). A brief description of each bird follows the taxonomy below:

Taxonomy:

Kingdom: Animalia
Phylum: Chordata (animals with backbones)
Class: Aves (birds)
Orders (of focus): Passeriformes (birds that have 3 toes forward, 1 toe back for perching; the songbirds) and Piciformes (birds that have 2 toes forward, 2 toes back; arboreal; nest in cavities)

All birds in the study, with the exception of the Northern Flicker, are in the order Passeriformes. The Northern Flicker is in the order Piciformes.

Birds (bird descriptions are a compilation from varied resources listed at the end of the report):

Family: Tyrannidae
Genus and **Species**: *Sayornis nigricans* (Black Phoebe) L 6.75" (17.0 cm); A typically solitary flycatcher with black and white markings (can't distinguish male and female in the field). It is commonly found near water as it uses mud to build its nest. It has a broad-based flat bill for the capture and consumption of insects from the air. Known to breed throughout Los Angeles County.

Family: Aegithalidae
Genus and **Species**: *Psaltriparus minimus* (Bushtit) L 4.5" (11.0 cm); A small, round, gray-brown gregarious bird that is found in flocks of 10-40. Mature females have pale not dark eyes seen in males. It is found in a variety of habitats from different types of woodland to dry scrublands and suburbs. It has a small, decurved bill for feeding on small insects and spiders (arachnids) that stick to vegetation. Known to breed throughout Los Angeles County.

Family: Emberizidae
Genus and **Species**: *Melozone crissalis* (California Towhee) L 9.0" (23.0 cm); Dark brown with orange-brown coloration on the face and under the tail feathers. Some streaks are found on the throat and breast. It is found as a solitary bird or in pairs. Habitats include coastal sage scrub, chaparral, parks, and gardens. Basically, they can be found in areas with heavy brush. It belongs in the sparrow family and a key characteristic is the presence of a conical bill used mainly for eating seeds. They eat insects and berries as well. Known to breed in LA County (but not in greatly urbanized areas).

Family: Picidae
Genus and **Species**: *Colaptes auratus* (Northern Flicker) L 12.5" (32.0 cm); The flicker has a brownish coloration with bars on the back, and spots and a black crescent on the breast. The red malar is seen on males, not females. It has a white rump, and red under the wings and tail feathers. It is thus referred to as a "red-shafted" Northern Flicker. This bird species is found in woodlands, marsh edges, parks, and suburban areas. It has a sharp, chisel-like, slightly curved bill for ground foraging of ants and beetles. Drumming is used for the defense of territory and communication. Known to breed in the mountains of northern eastern, and western LA County.

Family: Emberizidae; **Genus**, **Species,** and **Subspecies**: *Zonotrichia leucophyrs gambelii* (White-crowned Sparrow) L 7.0" (18.0 cm); This sparrow has distinctive white and black head stripes with a gray breast and a pink or orange conical bill. The immature bird has white and brown head stripes. It eats seeds, primarily. It also eats varied insects, grains, and berries. Its habitats are varied. It is common in woodlands, grasslands, roadsides and below backyard feeders. These birds are ground foragers. The *gambelii* subspecies breeds in Alaska, and the tundra and taiga of North America. They migrate to Southern California fall into winter. This bird does not breed in LA County.

Family: Parulidae; **Genus**, **Species, and Subspecies**: *Setophaga coronate auduboni* (Yellow-rumped Warbler) L 5.5" (14.0 cm); This bird has a very characteristic yellow rump with yellow flanks, throat, and crown. Variation in body coloration is seen and it could be streaky brown, gray, or black with females duller than males. The bird is found in coniferous and deciduous forests, shrubby locales, coastal vegetation, parks, and residential areas. It has a sturdy dark bill for plucking a wide range of flying insects. It can also eat berries and seeds. Ground foraging is certainly an option (this warbler is known to be a versatile forager). It breeds in montane forest zones of eastern LA County.

Observations of other bird species were also made at the five locations. A list of these is included as an addendum.

At each of the locations, the portable weather station was used to measure temperature, relative humidity, barometric measure, dew point, heat index, and wind speed. Calibration of the equipment was performed each study day. Precipitation measurements were recorded by the Madrona Marsh Weather Station, housed at a location within the sump enclosure, and data was accessed *via* the Friends of Madrona Marsh website.

A persistent drought has impacted the marsh, much like it has other wildlife areas throughout Los Angeles county. The marsh does have a lifeline with the presence of a sump at the southeast corner (Maple Ave and Sepulveda Blvd) and water is pumped onto the grounds when enough has been collected (through a variety of means). The direct

beneficiaries are regions towards the southwest corner of the marsh. Throughout most of the study period, the marsh was very dry with few instances of water release. A number of those instances were towards the end of fall when it rained a number of days. Four of the five study locations selected are under water during the rainy season. The results of the study for Locations 1 and 5 are the focus. Observations were made at Locations 2-4 but were unremarkable and are not included in the report.

Results and Discussion

Location 1: This area of the marsh is the coastal prairie/upland region characterized by scrubland (mulefat shrubs, mallow weed, grasses, coastal buckwheat) and trees such as a black willow, sycamore, and elderberry. Others nearby trees are cottonwood and oak (near the nursery) and arroyo willow. Of the six bird species, the most prevalent at this location was the White-crowned Sparrow. The first sighting at the marsh was reported September 17th, shortly before the observation period commenced on September 29th. The fewest number of birds observed was 4 with the highest being 58. Low numbers were seen in early relative to late fall. Generally speaking, as the temperature decreased, the number of birds increased (Figure 2). There were some striking decreases in numbers several days. The increase in numbers from early to late fall is consistent with observations made for the entire marsh from previous years (2000-2015). Evaluation of the data also show that dramatic changes in numbers can occur within a matter of days. The number of California Towhees was consistently low ($\leq$ 3 per observation day). Both of these birds are ground foragers that scurry about the ground with shrubs as cover for protection. Both were observed to feed in their characteristic fashion of "double-scratching", where they hop back to disrupt vegetation,

then hop forward before making a quick pounce. Competition for the same territory does not appear to be an issue as the California Towhee numbers were very low relative to the White-crowned Sparrow numbers. Interestingly, other sparrows were not present in large numbers. Occasional Song, Golden-crowned, Savannah, and Fox sparrows were observed in the area. Only once did a large flock of American Goldfinches forage in the area but they did so in vegetation above ground. Consistent visitors, Blue-gray Gnatcatchers, did so as well. These observations serve as an excellent example of niche partitioning where different species co-exist by using different parts of a habitat.

The average temperature reflects an average of the starting and final temperatures for the 1 hr observation period. Figure 2 shows a general trend from high-to-low (with occasional spikes). The magnitude change, however, from the start of the observation

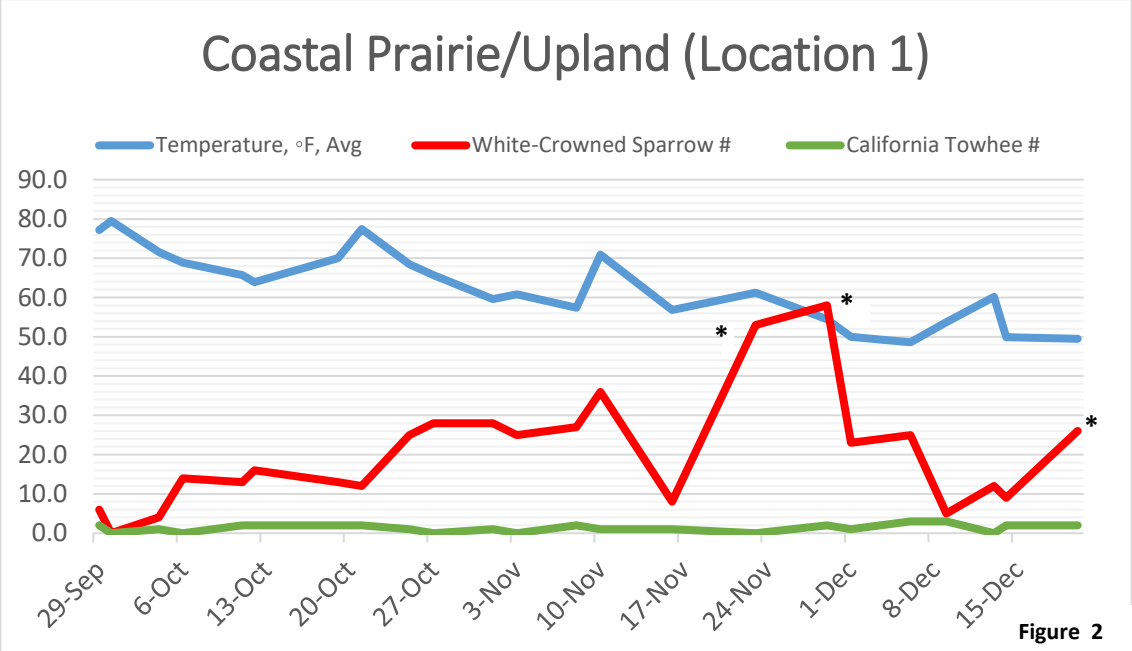

Figure 2

period to the finish was highly variable and did not show a consistent pattern. For example, a change of +26.7˚F (warmer) was seen one day in early fall vs. +19.1˚F seen one day in late fall. In the other direction (cooler), there was -3.9˚F change one day in

early fall vs. a -5.6°F change one day in late fall. For yet another day, there was no change at all. Such variability may prompt the question: Was the portable weather station functioning appropriately? The confidence level is high that it operated properly. First, for each study day, the instrument was calibrated. Second, barometric readings were consistent with the marsh weather station readings and prior to the late fall rains, barometric readings decreased (as they would be expected to for looming inclement weather). Finally, relative humidity readings varied in a pattern consistent with the temperature changes. With a greater change in temperature, the lower the final relative humidity; with a small or no change in temperature, the higher the final relative humidity. Bearing the above in mind, the magnitude of temperature and relative humidity changes did not influence White-crowned Sparrow or California Towhee behaviors.

While air moisture did not appear to influence behavior, precipitation appeared to be an influence. The asterisks in Figure 2 show White-crowned Sparrow numbers that were higher on days after rains. On November 20th and 21st, it rained approximately 0.50 in. On November 23rd, 53 White-crowned Sparrows were noted. On November 26th and 27th, it rained approximately 0.40 in. On November 29th, 58 were counted. On December 15th and 16th, it rained approximately 0.62 in, and 26 birds were counted on December 20th. New plant growth and water presence may have influenced the number of birds and the frenetic foraging activity mere feet from where the observations took place. Interestingly, on December 13th and 14th, few birds were seen. Severe "grooming" of Location 1 vegetation appeared to have taken place prior to these observations periods. Brush removal and evidence of raking were noted. With the rain and emergence of new plant growth, a rebound appears to have occurred. Finally, as fall progressed, a greater

number of immature birds was seen. Their numbers are included in the total number of White-crowned Sparrows. Their behavior was no different from the mature birds. The plumage of the mature bird is expected to appear during spring.

Black Phoebe, Northern Flicker, and Yellow-rumped Warbler numbers were consistently low. Interestingly, the Black Phoebe was not seen for seven observation days from November 29th through December 20th. The average temperatures during the observation periods were generally in the 40s and 50s. One hypothesis may be that it was too cold for aerial insect activity required by the Black Phoebe to forage. The Bushtit flocks, on the other hand, did just fine. They were active throughout the fall and foraged in the vegetation above ground, not in competition with the White-crowned Sparrow and California Towhee. The Northern Flicker was not recorded at Location 1 until late November. One was seen in a sycamore showing exploratory behavior. Drumming did not occur.

Location 5: This area of the marsh is characterized by a relatively open grassy area free of much shrub growth. Mulefat is present to a lesser extent than Location 1. The California bush sunflower is found in patches and the trees in the immediate vicinity are eucalyptus with cottonwood, elderberry, and arroyo willow to the southwest and west of the location. Of the six bird species evaluated, the Yellow-rumped Warbler and Black Phoebe were seen consistently. The numbers were low for each and persistent behaviors were noted throughout the fall. The highest count for the Yellow-rumped Warbler was 14, with numbers typically from 5-11 towards the second half of fall. The birds were generally localized to three eucalyptus trees, flying back and forth between them. The foraging behavior exhibited suggests a preference for the insects flying about the canopy

and sub-canopy leaves and branches. While the identity of the insects was not determined, it is known that this particular warbler has quite an appetite for the lerp psyllid. According to the Center for Invasive Species Research, UC Riverside (CISR, UCR), the lerp psyllid (*Glycaspis brimblecombei*) is an invasive species from Australia that was first found in Los Angeles County in June 1998. One study found that the Yellow-rumped Warbler can consume up to 10 lerp psyllids per minute (Lockwood and Gilroy, 2004). Figure 3 shows an image of this tiny insect known to invade eucalyptus trees throughout California. The numbers of Yellow-rumped Warblers found are not inconsistent with the marsh historical record. The average number noted throughout the preserve per survey day is 25.4 with an averaged maximum of 75 per survey day from 2000-2015.

Figure 3 (Credit: CISR, UCR)

Location 5 was the last site for each study day and observations were made late morning. The ambient temperatures were higher and the relative humidity measurements were typically lower than the other locations (the lowest average humidity was 11.6% during one of the hottest days at 92.1˚F). Analyses of temperature, relative humidity, and precipitation data suggest that these parameters did not influence the behavior of the Yellow-rumped Warbler at this location. Location 5 was also only one of two locations where a measurable wind speed was recorded. The maximum recorded was 3.4 m/s (or just shy of 8 mph) for a light breeze (Beaufort Wind Scale) that was not sustained. Like the other parameters, the breezes did not appear to influence the behavior of the Yellow-rumped warbler.

Regarding the other birds, the Black Phoebe exhibited characteristic foraging behavior where it would perch, dive for aerial insects, and perch once more. The numbers were unremarkable ranging from 1 to 3 per observation period. Only once did two interact in midair and only briefly. These flycatchers are generally solitary birds. In addition to the Black Phoebe, two flocks of Bushtit, four Northern Flicker sightings (1-3 birds/sighting), one California Towhee, and a handful of White-crowned Sparrows were observed at Location 5. Behavioral assessments from early to late fall were unexceptional as the appearances by these birds were limited. Interestingly, White-crowned Sparrow vocalizations were heard often in the distance. Exploration of their location one day revealed that about two dozen mature and immature birds were ground-foraging in shrubs near a collection of sycamore trees at the south fence of the preserve (Sepulveda Blvd adjacent). The location of the birds was not surprising given the dense shrubbery compared to the relative lack of shrubs at Location 5.

Conclusions

My observations at Locations 1 and 5 lead me to conclude that of the parameters measured, few had an impact on bird behavior for the six species studied from early-to-late fall. This notwithstanding, I gained much from the time spent on the preserve. The project became much more than what I had anticipated. Often the behaviors of other bird species were fascinating diversions. For example, the predatory and feeding behaviors of raptors like the American Kestrel and Red-tailed Hawk were absolutely amazing and a treat to watch. At one location, a Red-tailed Hawk dropped from a low perch in a eucalyptus tree where it was feeding to recover a gopher remnant not more than 4-5 ft from where I was making observations. I stood still and became a part of the background

as a clearly non-threatening entity. Other birds, like the Cassin's Kingbird, a flycatcher, vocalized loudly and carried out various aerial maneuvers as it interacted with other kingbirds or chased its prey. Without a doubt, my interest in ornithology has strengthened and continued enrichment is a goal moving forward. On a practical note, I hope to bring my experiences into the classroom. While my primary assignments are Biology 102, 103 and Microbiology 33, I never rule out Biology 101, where organismic biology and ecology are key components. Given my experiences this past fall, I am in a better position to discuss birds, consider their habitats, and provide information on a local preserve that my students would be highly encouraged to visit for educational purposes.

Expert Resources:

The following individuals provided guidance and/or other support (alphabetical order):

Jeanne Bellemin, Professor Emeritus, Zoology, El Camino College, and Friends of Madrona Marsh Board of Directors

Rebecca Donegan, Assistant Professor, Geography, El Camino College

Tracy Drake, Naturalist and Manager, Madrona Marsh Preserve

Kimball L. Garrett, Ornithology Collections Manager, Natural History Museum of Los Angeles County

Eric Hansen, Volunteer and Expert Birder, Madrona Marsh Preserve

Callyn Yorke, Professor, Biology, Antelope Valley College and UCLA Extension Instructor

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ADDENDUM

SUMMARY OF SPECIES OBSERVED FALL 2016 (INCLUDING THE SIX OF FOCUS)

ANATIDAE		
1	Snow Goose	
2	Canada Goose	
	moffitti	
3	Cackling Goose	
	"Aleutian" *leucoparenia*	
	"Cackling" *minima*	
4	Tundra Swan	
5	Wood Duck	
6	Eurasian Wigeon	
7	American Wigeon	
8	Gadwall	
9	Mallard	√
10	Blue-winged Teal	
11	Cinnamon Teal	
12	Green-winged Teal	
13	Northern Shoveler	
14	Garganey	
15	Northern Pintail	
16	Canvasback	
17	Redhead	
18	Ring-necked Duck	
19	Lesser Scaup	
20	Surf Scoter	
21	Bufflehead	
22	Common Goldeneye	
23	Hooded Merganser	
24	Red-breasted Merganser	
25	Ruddy Duck	
PHASIANIDAE		
Exotic	Ring-necked Pheasant	
GAVIIDAE		
26	Pacific Loon	
27	Common Loon	
PODICIPEDIDAE		
28	Pied-billed Grebe	
29	Eared Grebe	
30	Horned Grebe	
PELECANIDAE		
31	Brown Pelican	
32	American White Pelican	
PHALACROCORACIDAE		
33	Brandt's Cormorant	
34	Double-crested Cormorant	
ARDEIDAE		
35	Least Bittern	
36	American Bittern	
37	Great Egret	√
38	Great Blue Heron	
39	Snowy Egret	√
40	Cattle Egret	
41	Green Heron	
42	Black-crowned Night-Heron	
THRESKIORNITHIDAE		
43	White-faced Ibis	
CATHARTIDAE		
44	Turkey Vulture	
ACCIPITRIDAE		
45	Osprey	
46	White-tailed Kite	
47	Sharp-shinned Hawk	
48	Cooper's Hawk	√
49	Red-shouldered Hawk	√
50	Red-tailed Hawk	√
51	Northern Harrier	√
FALCONIDAE		
52	American Kestrel	√
53	Merlin	
54	Peregrine Falcon	
RALLIDAE		
55	Virginia Rail	
56	Sora	
57	Common Moorhen	
58	American Coot	
CHARADRIIDAE		
59	Black-bellied Plover	
60	Semipalmated Plover	
61	Killdeer	
RECURVIROSTRIDAE		
62	Black-necked Stilt	
63	American Avocet	
SCOLOPACIDAE		
64	Greater Yellowlegs	
65	Lesser Yellowlegs	
66	Solitary Sandpiper	
67	Willet	
68	Spotted Sandpiper	
69	Whimbrel	
70	Long-billed Curlew	
71	Marbled Godwit	
72	Western Sandpiper	
73	Least Sandpiper	
74	Dunlin	
75	Short-billed Dowitcher	
76	Long-billed Dowitcher	
77	Wilson's Snipe	
78	Wilson's Phalarope	
79	Red-necked Phalarope	
80	Red Phalarope	
LARIDAE		
81	Parasitic Jaeger	
82	Bonaparte's Gull	
83	Mew Gull	
84	Ring-billed Gull	
85	California Gull	
86	Herring Gull	
87	Thayer's Gull	
88	Glaucous-winged Gull	
89	Western Gull	√
90	Caspian Tern	
91	Royal Tern	
92	Elegant Tern	
93	Forster's Tern	
94	Least Tern	
95	Black Tern	
COLUMBIDAE		
Exotic	Rock Pigeon	
96	Band-tailed Pigeon	
Exotic	Ringed Turtle-Dove	
Exotic	Spotted Dove	
97	Eurasian Collared-Dove	
98	White-winged Dove	
99	Mourning Dove	√
100	Common Ground-Dove	
PSITTACIDAE		
Exotic	Cockatiel	
Exotic	Budgerigar	
Exotic	Peach-faced Lovebird	
Exotic	Mitred Parakeet	
Exotic	Red-masked Parakeet	
Exotic	Yellow-chevroned Parakeet	
Exotic	Red-crowned Parrot	
Exotic	Liliac-crowned Parrot	
Exotic	Eclectus Parrot	
Exotic	Blue And Gold Macaw	
CUCULIDAE		
101	Yellow-billed Cuckoo	
TYTONIDAE		
102	Barn Owl	
STRIGIDAE		
103	Great Horned Owl	
104	Burrowing Owl	
105	Short-eared Owl	
CAPRIMULGIDAE		
106	Lesser Nighthawk	
107	Common Poorwill	
APODIDAE		
108	Black Swift	
109	Chimney Swift	
110	Vaux's Swift	
111	White-throated Swift	
TROCHILIDAE		
112	Black-chinned Hummingbird	
113	Anna's Hummingbird	√
114	Costa's Hummingbird	
115	Calliope Hummingbird	
116	Rufous Hummingbird	
117	Allen's Hummingbird	√
ALCEDINIDAE		
118	Belted Kingfisher	
PICIDAE		
119	Acorn Woodpecker	
120	Red-breasted Sapsucker *"dagetti"*	
121	Downy Woodpecker	√
122	Hairy Woodpecker	
123	Northern Flicker	
	"Red-Shafted"	√
	"Yellow-Shafted"	
	"Red-shafted" x "Yellow-Shafted"	
TYRANNIDAE		
124	Olive-sided Flycatcher	
125	Western Wood-Pewee	
126	Eastern Wood-Pewee	
127	Alder Flycatcher	
128	Willow Flycatcher	
129	Least Flycatcher	
130	Hammond's Flycatcher	
131	Gray Flycatcher	
132	Dusky Flycatcher	
133	Pacific-slope Flycatcher	
134	Black Phoebe	√
135	Eastern Phoebe	
136	Say's Phoebe	√
137	Vermilion Flycatcher	
138	Ash-throated Flycatcher	√
139	Tropical Kingbird	
140	Cassin's Kingbird	√
141	Western Kingbird	
142	Eastern Kingbird	
143	Scissor-tailed Flycatcher	
LANIIDAE		
144	Loggerhead Shrike	
VIREONIDAE		
145	Bell's Vireo	
146	Gray Vireo	
147	Yellow-throated Vireo	
148	Plumbeous Vireo	
149	Cassin's Vireo	
150	Hutton's Vireo	
151	Warbling Vireo	
152	Red-eyed Vireo	
CORVIDAE		
153	California Scrub-Jay	
154	American Crow	√
155	Common Raven	√
ALAUDIDAE		
156	Horned Lark	
HIRUNDINIDAE		
157	Purple Martin	
158	Tree Swallow	
159	Violet-green Swallow	
160	No. Rough-winged Swallow	
161	Bank Swallow	
162	Cliff Swallow	
163	Barn Swallow	
PARIDAE		
Exotic	Crested Tit	
AEGITHALIDAE		
164	Bushtit	√
SITTIDAE		
165	Red-breasted Nuthatch	
166	White-breasted Nuthatch	
TROGLODYTIDAE		
167	Bewick's Wren	
168	House Wren	√
169	Marsh Wren	
REGULIDAE		
170	Golden-crowned Kinglet	
171	Ruby-crowned Kinglet	√
POLIOPTILIDAE		
172	Blue-gray Gnatcatcher	√
TURDIDAE		
173	Western Bluebird	√
174	Mountain Bluebird	
175	Hermit Thrush	
176	Swainson's Thrush	
177	American Robin	
MIMIDAE		
178	Northern Mockingbird	
179	Sage Thrasher	
STURNIDAE		
Exotic	European Starling	√
MOTACILLIDAE		
180	American Pipit	
BOMBYCILLIDAE		
181	Cedar Waxwing	
PTILOGONATIDAE		
182	Phainopepla	
PARULIDAE		
183	Tennessee Warbler	
184	Orange-crowned Warbler	√
185	Nashville Warbler	
186	Virginia's Warbler	
187	Lucy's Warbler	
188	Northern Parula	
189	Chestnut-sided Warbler	
190	Yellow Warbler	
191	Magnolia Warbler	
192	Yellow-rumped Warbler	
	"Audubon's"	√
	"Myrtle"	
193	Black-throated Gray Warbler	
194	Black-throated Green Warbler	
195	Townsend's Warbler	√
196	Hermit Warbler	
197	Blackburnian Warbler	
198	Prairie Warbler	
199	Palm Warbler	
	palmarum	
	hypochrysea	
200	Blackpoll Warbler	
201	Black-and-white Warbler	√
202	American Redstart	
203	Northern Waterthrush	
204	MacGillivray's Warbler	
205	Common Yellowthroat	√
206	Canada Warbler	
207	Wilson's Warbler	
208	Painted Redstart	
209	Yellow-breasted Chat	
THRAUPIDAE		
210	Summer Tanager	
211	Western Tanager	
EMBERIZIDAE		
212	Green-tailed Towhee	
213	Spotted Towhee	
214	California Towhee	√
215	Rufous-crowned Sparrow	
216	Chipping Sparrow	
217	Clay-colored Sparrow	√
218	Brewer's Sparrow	
	Northern (Timberline)	
219	Vesper Sparrow	
220	Lark Sparrow	√
221	Black-throated Sparrow	
222	Sage Sparrow	
223	Lark Bunting	
224	Savannah Sparrow	√
	nevadensis	
	beldingi	
225	Grasshopper Sparrow	
226	Fox Sparrow	
	schistacea	
	red race subspecies (Taiga)	
	unalaschcensis	√
	iliaca	
227	Lincoln's Sparrow	
228	Song Sparrow	√
229	Swamp Sparrow	
230	White-throated Sparrow	
231	White-crowned Sparrow	√
232	Golden-crowned Sparrow	√
233	Dark-eyed Junco	
	"Slate-Colored"	
	"Oregon"	√
	"Pink-Sided"	
CARDINALIDAE		
234	Northern Cardinal	
235	Rose-breasted Grosbeak	
236	Black-headed Grosbeak	
237	Blue Grosbeak	
238	Lazuli Bunting	
239	Indigo Bunting	
240	Painted Bunting	
241	Dickcissel	
ICTERIDAE		
242	Bobolink	
243	Red-winged Blackbird	√
244	Tricolored Blackbird	
245	Yellow-headed Blackbird	
246	Western Meadowlark	√
247	Brewer's Blackbird	
248	Common Grackle	
249	Great-tailed Grackle	√
250	Brown-headed Cowbird	
251	Hooded Oriole	
252	Bullock's Oriole	
253	Baltimore Oriole	
FRINGILLIDAE		
254	House Finch	√
255	Purple Finch	
256	Red Crossbill	
Exotic	European Goldfinch	√
257	Lesser Goldfinch	√
258	Lawrence's Goldfinch	
259	American Goldfinch	√
260	Pine Siskin	
PASSERIDAE		
Exotic	House Sparrow	
VIDUIDAE		
Exotic	Pin-tailed Whyduh	
PLOCEIDAE		
Exotic	Orange Bishop	√
Exotic	Red Bishop	
ESTRILDIDAE		
Exotic	Common Waxbill	
Exotic	Vitteline Masked Weaver	
261	Scaly-breasted Munia	√
Exotic	Bronze Mannikin	
Exotic	Java Sparrow	

Autumn Birds of Southern California

An introductory field course in ornithology, focused primarily on the naturally occurring avifauna of Southern California, with emphasis placed on bird identification, behavior, distribution, ecology, and conservation. Students learn to identify at least 50 native species of birds, understand distribution and behavioral patterns associated with particular ecological communities, and study the changes of species due to environment and land use impacts.

Moonlight Beach, Encinitas, CA

A field notebook and binocular are required. Students initiate and maintain a personalized life-list of birds. The course comprises 3 lecture meetings at UCLA and 5 Saturday morning field trips, planned to observe and discuss the birds of the outer coast, riparian-freshwater marsh, chaparral, oak woodland, desert, and mountain communities. Field trips involve easy-to-moderate walking for up to 2.5 hours, occasionally over uneven terrain. Students arrange their own transportation to field locations, including at least 2 field trips outside of Los Angeles County.

INSTRUCTOR:
Callyn Yorke, PhD

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University of California Los Angeles

The Division of Continuing Education - UCLA Extension

Jennifer L. Collins, Registrar

TRANSCRIPT OF RECORD

MAIL TO:

TERESA PALOS

[redacted]

DATE: 15 NOV 2016
STUDENT NAME: DR. TERESA P PALOS
STUDENT ID: [redacted]
SCHOOL ID:

COURSE NUMBER	TITLE	START DATE	END DATE	GRADE	HOURS	UNITS	CEU
BIOLGY X 401.21	AUTUMN BIRDS OF SOUTHERN CALIFORNIA	24 Sep 2016	12 Nov 2016	A	24.0	2.00	0.00

********** END OF TRANSCRIPT **********

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Courses and Credit

Academic credit is measured in quarter units, reckoned at 3 hours of student work per week, per term for each unit. Records prior to 1966 are measured in semester units. *Ad-hoc* course work in continuing education at this institution is not subject to GPA calculation.

XL 1 to XL 199: These courses are **equivalent** to undergraduate courses offered by the UCLA regular session. All XL courses are transferable for unit and subject credit toward the Bachelor's Degree at all campuses of the University of California. Courses numbered 1 to 99 are considered lower division (freshman/sophomore); those numbered 100 to 199 are considered upper division (junior/senior).

X 1 to X 199: These courses are **structured** in accordance with requirements for UCLA undergraduate courses, but will include subject matter not part of the regular undergraduate curriculum. While no courses are exactly equivalent to these are offered in UCLA's regular session, X 1 to X 199 courses are transferable for unit credit toward the Bachelor's Degree at all campuses of the University of California. Applicability for subject credit is typically determined by the UCLA student's major department, and by other institutions upon consideration of the full course description.

XLC 1 to XLC 199: UCLA undergraduate courses taught by regular faculty. Students who are not matriculated at UCLA are permitted to attend, enroll and record their credit through UCLA Extension. These records are fully transferable for unit, subject, and grade-points toward baccalaureate degrees at UCLA's College of Letters and Science for those who are subsequently admitted.

XLC 200 to XLC 299; and XLC 400 to XLC 499: UCLA graduate and professional level courses into which non-matriculated Extension students have enrolled. Courses in the 200 series are within curricula leading to the M.A. or M.S. degrees at UCLA. Courses in the 400 series are within curricula leading to professional masters degrees, such as the M. Ed., M.B.A., M. Arch. and M.F.A. at UCLA. Credit earned in these classes may be transferable for advanced standing in degree programs elsewhere.

X 300 to X 399: Professional credit-bearing courses in the field of education, specially designed for teachers and prospective teachers. Major emphasis is on pedagogy, teaching methods and materials, and curriculum design. Credit earned in these courses may lead to advanced standing in baccalaureate degree and teacher credentialing programs.

X 400 to X 499: Generally post-baccalaureate credit-bearing courses and lecture series in professional fields, designed in content, focus and presentation style to standards of instruction used in professional-level degree programs. Credit earned in these courses may lead to the award of formal certificates by UCLA Extension, and may be transferable for advanced standing in degree programs in professional studies elsewhere, subject to the procedures of the receiving institution. Many courses in this category are also of general interest, while also offering particular opportunities for professional, paraprofessional, or other career advancement. Students may elect to take these courses for Continuing Education Units (CEU) in lieu of academic credit (see below.)

800 to 899: Professional level noncredit courses bearing Continuing Education Units (CEU). Grades are not issued for CEU-bearing courses in accordance with standards established by the International Association of Continuing Education and Training. Students who satisfactorily participate are awarded 1 CEU for every 10 contact hours of instruction. These programs are typically designed to fulfill requirements of professional associations and state licensing agencies requiring advanced continuing instruction.

900 to 999: Noncredit College-preparatory or English language-preparatory programs in which course work is evaluated.

Grading Scale

The grades A, B, C, and D may be modified by the suffixes "+" and "-" for emphasis.

A	-	Superior
B	-	Good
C	-	Fair
D	-	Poor
F	-	Failure
P		Passed (work which would otherwise earn a grade of C or higher)
NP	-	Not Passed (work which would otherwise earn a grade less than a C)
S	-	Satisfactory (work in certain graduate level courses which would otherwise have earned a grade of B- or higher)
U	-	Unsatisfactory (work in certain graduate level courses which would otherwise have earned less than a B-)
I	-	Incomplete (work of passing quality but incomplete; may be revised by completing work as required)
N	-	Attended, not for credit
DR	-	Deferred Report

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