

and the former were occasionally seen near the tern colony.

If predation occurs at anywhere near the frequency that we noted, terns lose a very high percentage of eggs throughout the incubation period. Although it is doubtful that the turnstones could take immediate advantage of pecked eggs, the terns probably quickly desert broken eggs, leaving them unguarded for the turnstones to eat. Based on complete shoreline and partial interior count, at the time of our visit an estimated 150 Ruddy Turnstones were present on "Janet" Island, and 28,000 eggs with about 60,000 attending

adult Sooty Terns. "Janet" Island has the only Sooty Tern breeding colony on Eniwetok Atoll.

We wish to thank R. W. Hiatt of the University of Hawaii for use of the Eniwetok Marine Biological Laboratory on Eniwetok during our stay. A. Wetmore read the paper, kindly offered valuable suggestions, and made available his notes from Laysan Island. This is Paper No. 51, Pacific Ocean Biological Survey Program, Smithsonian Institution, Washington, D. C. 20560.

Accepted for publication 22 May 1969.

WINTER WING MOLT IN THE WESTERN GREBE

FRED C. SIBLEY¹

Patuxent Wildlife Research Center
U. S. Bureau of Sport Fisheries and Wildlife
Ojai, California 93023

During bird-cleaning operations associated with an oil leak in the Santa Barbara Channel, 300–400 Western Grebes (*Aechmophorus occidentalis*) were examined and 35 were found to have been undergoing a full wing molt. The oil slick appeared on 28 January 1969, and by the next day Western Grebes coated with oil were coming onto the beaches. On 3 February, 66 live and dead birds at the cleaning stations and an additional 12 birds picked up on 30 January were examined. Of these birds, 16 (approximately 20 per cent) were in the process of molting the flight feathers. The remiges were at various stages of regrowth. In some birds the feathers were just emerging from the sheaths, and in others they were nearly full grown.

By 10 February at least 400 more Western Grebes had come ashore. Of 103 survivors examined, only six were molting their wing feathers. This probably indi-

cates that molting birds come ashore sooner and succumb more rapidly than do non-molting birds. The limited data on individual birds made it impossible to verify this hypothesis.

An additional 13 molting grebes were examined at beaches 20–40 miles from Santa Barbara during February. However, the date of first appearance of oil offshore from these beaches and the total number of grebes removed is unknown.

According to Palmer (Handbook of North American birds. Vol. 1. Yale University Press, New Haven, 1962. p. 94–104), the Western Grebe undergoes a complete wing molt in the fall. He lists only one instance of a winter wing molt (Palmer says "molting rectrices" but this is presumably an error). No reliable aging criteria were found. The limited sample of molting birds autopsied consisted of five males and five females.

Storer (Living Bird 4:59, 1965) describes two color phases of the Western Grebe, a light phase with orange-yellow bill and a dark phase with a dull greenish-yellow bill. Only two of the 35 molting birds had yellow-orange coloring anywhere on the bill, although 40 per cent of the 103 birds examined 10 February had this light phase bill color. It is possible that the molting birds represent a separate population since Storer states that the dark-phase birds are more numerous in the northern populations.

Accepted for publication 11 November 1969.

¹ Present address: Point Reyes Bird Observatory, Palomar Ranch Mesa Rd., Bolinas, California 94924.

OCCURRENCE OF THE EASTERN SPECIES OF *OPORORNIS* AND *WILSONIA* IN CALIFORNIA

GUY McCASKIE

San Diego Natural History Museum
Balboa Park
San Diego, California 92103

Intensified fieldwork by an increasing number of ornithologists has in recent years produced records of most of the eastern species of wood warblers (*Parulidae*) in California. During the spring the majority of these vagrants occur in late May and in June, a full month after the main peak for the normal western migrants. During the fall there is a tendency for these vagrants to occur late; however there are records of vagrants throughout the entire migration period. The occurrences of the eastern species of *Oporornis* and *Wilsonia* in California follow this pattern.

The following records are arranged from north to south for the spring and fall periods. I have checked into all of the sight records reported here, and feel that there is a minimum chance of error involved in their validity; most birds were seen by many observers, and at least one competent observer was involved in every sighting.

Kentucky Warbler. (*Oporornis formosus*). An adult male banded and photographed (slide deposited in San Diego Natural History Museum) on Point Loma, San Diego County, on 4 June 1968 by Alan Craig is the only record for California.

Connecticut Warbler. (*Oporornis agilis*). During the spring period one was collected on Southeast Farallon Island on 16 June 1958 (Bowman, Condor 62:410, 1960); one was seen there on 28 and 30 May 1965, and two were collected there on 22 June 1965 (Tenaza, Condor 69:579, 1967). An adult female was banded and photographed (slide deposited in San Diego Natural History Museum) on Point Loma, San Diego County, on 4 June 1968 by Virginia Coughran.

During the fall an immature was banded (wing length, 68 mm; tail length, 49 mm) on Southeast Farallon Island on 13 September 1968 by Henry Robert; one was seen there on 4 October 1968 by Richard Stallcup; one was seen at Pebble Beach, Monterey County, on 27 September 1964 by Vernal Yadon and Dr. Ronald Branson; and I collected an immature male (deposited in San Diego Natural History Museum) near Imperial Beach, San Diego County, on 27 September 1963.

Mourning Warbler. (*Oporornis philadelphia*). An adult female was collected (deposited in Museum of Vertebrate Zoology, Berkeley) at Deep Springs, Inyo

County, on 12 June 1968 by Helen Strong. An immature female was collected (deposited in San Diego Natural History Museum) on Point Loma, San Diego County, on 3 October 1968 by Virginia Coughran.

Hooded Warbler. (*Wilsonia citrina*). During the spring period a singing male was seen in San Francisco, San Francisco County, between 4 and 6 May 1958 by Florence Plymell and others; a singing male was seen in Berkeley, Alameda County, on 27 May 1960 by Dr. Edwin Willis; and an adult male was banded and photographed (slide deposited in San Diego Natural History Museum) in Topanga Canyon, Los Angeles County, on 17 June 1962 by Don Bleitz.

During the fall I collected an immature male (deposited in San Diego Natural History Museum) on Southeast Farallon Island on 29 September 1968, and Cliff Lyons and I saw a female-plumaged bird at Deep Springs, Inyo County, on 25 August 1967. A male-plumaged bird was seen and photographed (photograph deposited in San Diego Natural History Museum) near Borrego Springs, San Diego County, between 24 and 28 November 1967 by myself and others, and a male-plumaged bird was banded and photographed (slide deposited in San Diego Natural History Museum) on Point Loma, San Diego County, on 26 October 1968 by Alan Craig.

Canada Warbler. (*Wilsonia canadensis*). The only spring record to date is one collected in the Panamint Mountains, Inyo County, on 13 June 1967 (Northern, Condor 70:391, 1968).

During the fall period one was seen in Pacific Grove, Monterey County, on 17 and 18 October 1968 by Dr. Ronald Branson and Elgin Hurlbert; one was seen in Morro Bay State Park, San Luis Obispo County, on 21 November 1965 by Mr. and Mrs. Tom Hyland and others; one was seen near Santa Barbara, Santa Barbara County, on 11 October 1943 (Hutchinson, Audubon Mag. 46:80, 1944); one was seen at Point Dume, Los Angeles County, on 27 October 1961 by Virginia Coughran; two were seen at Barton Flats in the San Bernardino Mountains, San Bernardino County, on 5 October 1968 by Eugene Cardiff and others, and one of these, an immature female, was collected (deposited in San Bernardino County Museum) the following day by Cardiff; one was seen near La Jolla, San Diego County, between 24 and 30 September 1967, during which time it was banded and photographed (slide deposited in San Diego Natural History Museum) by myself and Alan Craig; and one was seen near Imperial Beach, San Diego County, on 29 October 1967 by myself and Alan Craig.

There have been only two previously published reports of the Connecticut Warbler and two published reports of the Canada Warbler for California; the other species are reported for the first time for California. I am indebted to all these people mentioned above for permitting the use of their records.

Accepted for publication 22 May 1969.

NOTES ON THE LIFE HISTORY OF THE MOUSE-COLORED FLYCATCHER IN SURINAM

F. HAVERSCHMIDT

Wolfskuijstraat 16
Ommen, Holland

The Mouse-colored Flycatcher (*Phaeomyias murina*) is one of the many small and dull-colored flycatchers in tropical South America. For a description of the bird, its habitat, food, nest, and eggs, I refer the reader to my recently published "Birds of Surinam" (Oliver and Boyd, Edinburgh, 1968).

It was common in my garden just outside Paramaribo, Surinam, where I found six nests with eggs; one on 31 January, five in April, and one with nestlings on 24 September.

Nest and nest building. The nest is a small open cup placed in a fork of two branches, usually below 4 m. It is made of fine grasses and green moss and is thickly lined with feathers (fig. 1). Apart from white chicken feathers, I found a few green ones, probably from the Green-rumped Parrotlet (*Forpus passerinus*) which was a regular guest in my garden. The nest is built by one bird only (probably the female), as I observed in two nestings in 1961 and 1965. When the building bird arrived at the nest, it was sometimes accompanied by its mate, which uttered its melodious call but never assisted in building.

On 3 April 1965 I observed a bird building in a small tree near one of my windows. The nest consisted then only of a few dead grasses. On 8 April the nest appeared to be finished, and the sitting bird was turning around in it, streaking with the underside of its lower mandible along the outer wall. On 10 April the bird sat steadily. In this case nest building lasted about eight days.

Egg laying. The two immaculate white eggs are laid on alternate days. My observations in two cases



FIGURE 1. Nest of Mouse-colored Flycatcher, Paramaribo, Surinam, 9 February 1960.

were as follows: one egg at noon of 31 January 1960 and at 06:45 on 2 February, but two eggs at 16:15 of 2 February; one egg at 15:50 on 28 April 1960 and at 17:00 on 29 April, but two eggs at 16:00 on 30 April.

Incubation. According to my observations (two in 1960 and one in 1965) incubation is by one bird only. My April 1965 observations of an incubating female were as follows: 17 April, 12:30–12:50, 15 min on the nest, 5 min off the nest; 17 April, 16:00–17:00, 31 min on, 29 min off; 19 April, 11:45–13:00, 58 min