162. **Polioptila cærulea obscura.** Western Gnatcatcher. Common resident. Abundant in spring and early summer.
163. **Hylocichla aonalaschkæ.** Dwarf Hermit Thrush. Abundant winter resident.
164. **Merula migratoria propinqua.** Western Robin. Very abundant winter resident.
165. **Hesperocichla nævia.** Varied Thrush. First noted March 13, 1901, when a number were seen in a grove of live oaks. We have never come across this species here before, and none of the men on the ranch were familiar with it.
166. **Sialia mexicana occidentalis.** Western Bluebird. Abundant resident.
167. **Sialia arctica.** Mountain Bluebird. Regular winter visitant. Sometimes very numerous.
168. **Passer domesticus.** English Sparrow. Common nuisance around buildings

This list is approximately complete as far as it goes, yet hardly a year passes without a new record being made of some visitant or wanderer. As neither my brother nor I have resided at Paicines for any length of time it is impossible to give correct data of arrival of migrants, and this we have made no attempt to do.

The past three years of successive drought reduced the bird life as far as immigrants were concerned to a very low ebb, and even affected many of the resident species. This winter however brought with it abundance of rain, and at the present writing the outlook for luxurious vegetation in the way of crops, grass, etc., could not be surpassed. The result of this will be a great plenty of food for the birds and it will be interesting to see whether this will at once produce a marked increase in the bird life over the last three seasons.

San Geronimo, Cal., April 6, 1901.

Breeding Range of the Allen and Rufous Hummingbirds.

I was glad to see an answer in the July CONDOR to my query in regard to the breeding of the Rufous Hummer in California. But I do not consider the evidence offered by Mr. Emerson to be unquestionable or even worthy of any credence whatever. For have I not again and again seen male Rufous Hummers pursuing female Anna, Black-chinned and even Costa Hummers, where the latter appeared in the vicinity of the temporary feeding grounds of the pugnacious Rufous? And is it not probable that the female of the Allen Hummer would be treated in the same way if similar opportunity afforded, just as Mr. Emerson's two instances illustrate? And then too, has it ever been shown that after mating the male of any of our hummingbirds has anything whatever to do with the female or nest? Unless otherwise proven it seems to me more probable that the nests observed were those of the Allen. It seems to me an almost impossible feat for even the keenest observer to distinguish the female Rufous and Allen Hummers in life, though the two species should present themselves side by side at close range. For I am sure it is hard enough to identify the two in the hand. I am aware that a number of good authorities have recorded the breeding of the Rufous Hummer in Central and Southern California. But it will do these no injustice for some one to present fresh evidence of an unquestionable nature (if obtainable!); to be explicit, an incubating female taken with the nest and eggs.

The reasons for my present position in this regard are somewhat as follows:

Selasphorus rufus is typically a bird of the Humid Northwest Coast Boreal (of Merriam). The extreme of brown coloration is reached in both sexes of this species; and it is a matter of long observation that the brightest browns are developed in birds of that region, whether resident, or present only during the breeding season as in the case of the Rufous Hummer. For it is also known that the breeding environment of migratory species is much more potent in its effects than is their environment during the rest of the year. Now the Humid Northwest Coast Boreal extends southward along the Pacific Coast from the vicinity of Sitka, Alaska, to Humboldt Bay, California (*fide* Merriam). *S. rufus* breeds abundantly in most of this faunal area, and thus if it breeds at all in California I should expect to find it in the Humboldt Bay region, but *not south* of that vicinity. *Selasphorus alleni* is known to breed abundantly in the San Francisco Bay region and north through Marin County and south through the Santa Cruz and Santa Lucia Mountains to the Santa Barbara Islands. Now the "San Francisco Bay Region" is principally Humid Upper Sonoran, and the narrow coast belt to the north up to Humboldt Bay and southward through the Santa Lucias is Humid Pacific Coast Transition as well as Humid Upper Sonoran. *S. alleni* appears to be exclusively a breeding bird of this Humid Transition and Humid Upper Sonoran, and I do not know of its breeding outside of those faunal areas. The Allen Hummer is characterized by a less extensive brown coloration in both sexes than the Rufous. This is according to our theory, for the humidity and cloudy weather is less in the summer habitat of the former than in that of the latter. But the considerable amount of brown of *S. alleni* still shows it to be a normal inhabitant of a moderately humid area. And, in fact, do we ever find it breeding in any of the arid portion of the interior and Southern California? It seems to me probable, therefore, that the form *alleni* has evolved in this southern less humid coastal area at first as a geographical race or subspecies of *S. rufus*. Or, perhaps, since the origin of the hummingbirds is undoubtedly neotropical, the reverse was the case; that is, that *rufus* evolved from a lighter-colored ancestor more nearly like *alleni*. At any rate my point is that *Selasphorus alleni* and *S. rufus* should be as yet confined to separate zonal or faunal areas in the breeding season. I believe geographical isolation to be absolutely essential to the differentiation of two forms. *S. alleni* and *S. rufus* are very much alike; their distinguishing characters are slight and not altogether constant, and perhaps intergradation may still exist somewhere in the Humboldt Bay region. I do not think it quite reasonable to expect to find two such close forms breeding in the same locality or even anywhere in the same fauna, such as includes the San Francisco Bay region, where *S. rufus* has been reported nesting so often, but where I know that *S. alleni* is a very common breeder.

Of course it is possible, even accepting the above doctrine, that after the complete differentiation of the two forms and disappearance of intermediates, *S. rufus* may have invaded the breeding habit of *S. alleni*, and that the two species may thus now nest in the same area. And this is undoubtedly what has happened in the case of other species of hummingbirds breeding in the same locality, but which are much more remotely related. Yet it seems to me that the present case is not so far properly proven. It must be kept in mind that both *S. rufus* and *S. alleni* occur broadcast during the migrations, and the males, immediately after mating may wander many hundred miles in search of favorable feeding grounds, and thus occur at the same season and in the same locality with other breeding species of hummingbirds, mingling with them in combat or play. I therefore repeat the query made in the May CONDOR. JOSEPH GRINNELL.