

to determine something of the usefulness of red cell permeability in avian taxonomy at the generic and specific levels.

The techniques used were those outlined in the paper by Jacobs, Glassman, and Parpart (*loc. cit.*). The penetrating solutions used were 0.3M thiourea, urea, glycerol, and ethylene glycol, all at pH 7.3. The time necessary for 75 per cent hemolysis in these solutions was determined by the use of a Coleman spectrophotometer and was measured by an electric timer.

Blood was taken from House Finches (*Carpodacus mexicanus*), Fox Sparrows (*Passerella iliaca*), and Song Sparrows (*Melospiza melodia*). The choice of species was partly one of convenience, as all were abundant in central California in January, 1952, when the study was made. An equally important reason for the choice is that by contemporary systematics the House Finch is placed in a different subfamily of the Fringillidae than are the sparrows; the latter are close enough that they are considered by some to be congeners (Linsdale, Univ. Calif. Publ. Zool., 30, 1928:367-368).

An inspection of the relationships displayed in figure 1 shows that even for only four solutes the sparrows have more affinities to each other than have they to the House Finch. Doubtless the use of a greater variety of solutes would show this affinity more precisely.

Times of hemolysis for the House Finch were: thiourea, 98-99.4 seconds (2 trials); urea, 118-138, mean 130 (3); glycerol 2.7-3.5, 3.0 (3); ethylene glycol, 3.7-4, 3.9 (2). For the Fox Sparrow: thiourea, 81-100, 91 (4); urea, 132-150, 149 (4); glycerol, 3.5-4.3, 3.9 (4); ethylene glycol, 5.1-5.6, 5.5 (4). For the Song Sparrow: thiourea, 81-87.7, 84.3 (2); urea, 75.4-103, 91.2 (4); glycerol, 3.7-5.0 4.1 (3); ethylene glycol, 3.6-5.7, 4.9 (5).

It would seem then that the potential worth of hemolysis in taxonomy at the level of genus and species in birds has been indicated; the need for additional investigations, however, is clear.—RICHARD F. JOHNSTON and BENJAMIN HOCHMAN, *Museum of Vertebrate Zoology and Department of Zoology, University of California, Berkeley, California, August 21, 1952.*

**Rufous Hummingbird Nesting in California.**—Since the summer of 1949 the writer has been sure that the Rufous Hummingbird (*Selasphorus rufus*) nested in the interior portion of the Trinity Mountains in northern California. In May of 1952, a female with nest and eggs were collected in extreme northeastern Humboldt County, California. Dr. Robert T. Orr of the California Academy of Sciences checked on the identification, and using the width of the outer rectrices, pronounced the bird *Selasphorus rufus*. The skin is now deposited in the collection of the California Academy of Sciences and the nest and eggs are in the Talmadge Collection. This is the first definite record of the nesting of this species in California.

The history of the search dates back into the ornithology of Humboldt County. For years, the older collectors that resided in the county believed the Rufous Hummingbird was nesting somewhere in the area. They based their assumption on the fact that although the Allen Hummingbird (*Selasphorus sasin*) was the common nesting species, many Rufous were seen during the breeding season. Nests and females were closely watched all over the region. The only unusual find were two nests of the Anna Hummingbird (*Calypte anna*) along the Mad River at Blue Lakes, in May, 1940, and on May 31, 1946.

In the early summer of 1949 the writer took up residence on the Trinity River. Judging by back coloration males of both Allen and Rufous hummingbirds were along the river. Field trips into the higher mountains east of the Trinity River revealed only the red-backed males. No specimens were taken as the peak of the normal nesting season had passed.

In late June of 1950 a field trip was taken to Trinity Summit, and a nest with large young was located. The female was observed closely and the two outer rectrices appeared to be very wide. No specimens were taken but the nesting site was marked.

In 1951 a more intensive search was carried on at the higher elevations, with the same result. Another nest was located with young and marked. As in previous years, the nesting birds along the Trinity River proved to be the Allen, with the "red-backs" restricted to the mountains east of the river.

The late winter of 1952 was rather severe in the Trinity Mountains, but late in the spring a short field trip was made to snow line. It was found that many of the higher basins with either a southern or southwestern exposure were almost clear of snow. A search was made at the site of the nest that was found in 1950. On May 4, 1952, a nest with two fresh eggs with the incubating female was col-

lected at what is known as Mud Springs. This is a small meadow of about eight acres, with a southwestern exposure at an elevation of about forty-five hundred feet. It is in a dense stand of the white fir (*Abies concolor*). The meadow is centered by a small brush-covered swamp. Several small clumps of fir are scattered about the meadow, one edging the swamp. It was in this clump of firs, between the actual foliage of the trees and the brush that the nest was located.

The nest was saddled on a small dead twig that jutted at a slight angle below one of the lower branches. The nest was six feet above the ground, ten feet out on the limb, and two feet from the tip of the limb. The small structure was composed of a brownish moss, with three lichens tied on by cobwebs. The cobwebs are quite conspicuous, as they are a light gray, contrasting with the brown of the rest of the nest. The nest is lined with willow down. The measurements are maximum diameter 45 millimeters, maximum height 30 millimeters. There is nothing special about the nest or eggs to set it apart from others of the same genus of birds.

With the information that the writer has gained, it may be assumed that the Rufous Hummingbird is a sparse nesting species at the higher elevations in the interior Trinity Mountains. The breeding hummers from the lower elevations along the Trinity River have all turned out to be the Allens. Alden H. Miller (letter) states that he took this species at a nest at Hyampom on the South Fork of the Trinity.—ROBERT R. TALMADGE, *Willow Creek, California*, September 15, 1952.

**Additional Notes on the Birds of Santa Rosa Island, California.**—Through the kindness of Mr. Ed Vail the writer together with Waldo Abbott was permitted to do some ornithological work on Santa Rosa Island, California. The period of March 15 to 28, 1951, was spent on the island, a total of 14 days. We worked the canyons and uplands from Skunk Point to Carrington Point, and inland for approximately four miles.

A special search was made for Rufous-crowned Sparrows (*Aimophila ruficeps*), but none was seen nor heard. The same type of habitat on Santa Cruz Island would have produced a number of this species. We concluded, therefore, as did A. H. Miller (Condor, 53, 1951:122), that breeding *Aimophila* are non-existent on Santa Rosa Island.

The following species were seen on different occasions, none of which has been specifically reported from Santa Rosa Island heretofore: Sharp-shinned Hawk, Marsh Hawk, Pigeon Hawk, Spotted Sandpiper, Sanderling, Black-bellied Plover and Herring Gull.

The following species were observed or collected; the specimens are now in the collection of the Santa Barbara Museum of Natural History.

*Oreoscoptes montanus*. Sage Thrasher. One was taken near Skunk Point. This bird was found in a patch of prickly pear cactus (*Opuntia*); when dissected it was found to have been feeding on small grasshoppers.

*Regulus calendula cineraceus*. Ruby-crowned Kinglet. Two female kinglets were taken by Abbott on March 18 and 21, respectively.

*Vireo gilvus swainsoni*. Warbling Vireo. Abbott collected this vireo in the canyon near the ranch house.

*Dendroica coronata*. Myrtle Warbler. One was shot but not retrieved on March 24.

*Agelaius phoeniceus*. Red-winged Blackbird. Three female Red-wings were seen in the corrals at the ranch house.

*Molothrus ater obscurus*. Cowbird. A female was taken by Abbott on March 27 at the ranch house. It was with some Red-winged Blackbirds.

*Carpodacus purpureus californicus*. Purple Finch. An immature male was taken near the ranch house. I saw an adult male in ranch house canyon.

*Passerculus sandwichensis*. Savannah Sparrow. Four were collected. Two proved to be *P. s. alaudinus* and two were *P. s. brooksi*. Thanks are due A. H. Miller for the racial identification of these birds.

All records have been evaluated by reference to Howell (Pac. Coast Avif. No. 12, 1917:1-127), Pemberton (Condor, 30, 1928:146-148), Willett (Pac. Coast Avif. No. 21, 1933:1-204), Grinnell and Miller (Pac. Coast Avif. No. 27, 1944:1-608).—EGMONT Z. RETT, *Santa Barbara Museum of Natural History, Santa Barbara, California, July 15, 1952*.

**Unrecorded Specimens of *Neochloe brevipennis* Taken in Oaxaca.**—Ninety-five years ago Sclater described *Neochloe brevipennis* from Orizaba, Veracruz, and until just recently only six