any seed planted, and was planted in such quantity that there were numbers of seeds on the surface. Except for the cedar seed, which tastes something like bran, and the white fir, seeds of the other species are agreeable to the human palate.

From the appearance of the nipped cotyledons of some young white pine and Douglas fir seedlings, it was surmised that the juncos had picked off the attached seeds which still contained some nutrient matter.

The juncos were active only in cutover and in partly cutover areas. Apparently they never penetrated to the nearby seedbeds in the dense virgin timber. In other words, their activities were confined strictly to open, somewhat brushy habitats.

The birds took seeds from all surfaces: duff (the layer of litter which covers the soil under the forest, in this case 1 to 2 inches thick and composed of dead leaves and twigs of the six tree species mentioned above), mineral soil, and burnt mineral soil; but they scratched for seeds below the surface only on those beds covered with duff. They never scratched in a mineral soil bed, although there was invariably a wealth of seeds less than a quarter of an inch below the surface.

The certainty with which the birds flew from the northwest corner of one seed bed to the northwest corner of another (the white pine blocks were in the northwest corner of the beds), without any intermediate stops or hesitation, indicated a surprisingly exact memory for places.

The last two observations throw some light on the nature of the juncos' intelligence. Apparently it functions expertly within the limits of ordinary circumstances, as illustrated by their returning so accurately to the food source, and scratching among leaf-litter. Such stimuli and reactions are within the realm of the birds' experience. But when extraordinary conditions obtain—and the presence of forest seed buried in exposed soil is probably extraordinary, compared to its common presence on the soil surface or buried in the duff—their intelligence does not turn those conditions to advantage.

Moreover, that they did not show any interest in the soil surfaces after the surface seed had been picked off (although they returned for the attached seeds once the seedlings had broken ground), makes it seem probable that juncos do not detect such seed by smell, but by sight alone.—LINCOLN ELLISON, *United States Forest Service, Washington, D. C., March 28, 1934.*

Sea Gull Lives Again.—The following item was given to me by my nephew, Lieut. B. W. Decker, of the U. S. Navy. As physicians tell me the dosage of adrenaline mentioned is about all an adult man could stand, the facts, as relating to a bird, may perhaps be of interest.

"Adrenaline returned to life a Western Gull which had fallen to the steel deck of the U. S. S. Wasmuth, steaming at 15 knots off San Diego, California, in February, 1934. The accident happened when the gull collided with the ship's rigging, or was rendered unconscious by the electrical discharge from the radio antenna. The bird was apparently dead, as it was lying on its back, with no perceptible motion. Its circulation had stopped, as shown by the colorless feet.

"L. R. Shockley, Chief Pharmacist's Mate of the destroyer, prepared a hypodermic, using epinephrine hydrochloride (adrenaline) 1/1000. He administered a subcutaneous injection about the breast, using one cubic centimeter. This was done at least five minutes after the bird had fallen to the deck. The color returned to the gull's feet, making them light pink. Shortly it opened its eyes and rolled over on its breast. Thirty minutes later a second injection caused the bird to flutter a wing and stand up, reeling as if intoxicated with no sense of balance. About a half hour after the second injection a third was administered, bringing the total amount injected to three cubic centimeters. After this the bird appeared to be dazed, but steady on its feet and capable of motion. It was then discovered that it was totally blind in the right eye—probably the cause of its colliding with the ship.

"The men in the crowd about the 'patient' approached and stroked its head and back, but when the ship's doctor, who gave one of the injections, attempted to touch it the bird retreated slowly. Two hours after the accident the bird was capable of walking, but was not interested in food or water. At this time it demonstrated its

contempt for the cleanliness of the deck and consequently the disgusted boatswain's mate 'gave it the air.' It fluttered or glided a hundred feet and alighted easily on the water where it remained as the ship steamed away."—ALBERT M. INGERSOLL, *San Diego Society of Natural History, San Diego, California, March 30, 1934.*

The Little Blue Heron in California.—During the winter of 1931 I saw at Point Mugu in Ventura County a small white heron which, I was satisfied, had greenish legs instead of black. Contact with Little Blue Herons (*Florida caerulea*) in El Salvador and coastal Mexico made me at once suspect this bird of being a young specimen of that species. A similar bird was observed by my colleague, Dr. R. B. Cowles, during the following winter. He was also satisfied that the color of the legs was greenish yellow. On January 2 of the current year, I saw such a specimen with greenish legs and dark areas upon the dorsal surface. The distance was such that the field glass could not map out the darker areas nor distinguish them from adventitious stains, though white herons are seldom soiled in any way.

On February 1, two of these birds were watched for nearly an hour at a distance of forty yards. There were no dark areas on the dorsum, but the legs were greenish yellow without a shadow of doubt, and the beaks yellow at the base. Young specimens of *Florida* may be immaculately white in plumage, there may be diffuse pigment, or there may later appear entirely blue feathers in sharp contrast to the white. In the series of *Florida* at the Los Angeles Museum, all three types are represented. The birds observed on February 1 were perfect representatives of the pure white phase. The species occurs regularly on the west coast of Lower California, and I feel confident that it commonly drifts northward to our own southern coast marshes where it has been assigned by many observers to the category of Snowy Egret (*Egretta thula*).—LOYE MILLER, *University of California at Los Angeles, February 17, 1934.*

Spring Notes from Mount Pinos, Kern County, California.—Having noted the scarcity of published definite dates of arrival or departure of some common southern Californian birds, the writer submits the following from the Kern County side of Mount Pinos.

Ixoreus naevius meruloides. Northern Varied Thrush. Common through March and early April from 6000 to 7000 feet altitude. Five or six birds seen (one collected) by Ora A. Willett April 15.

Passerella iliaca stephensi. Stephens Fox Sparrow. Fairly common in ceanothus patches at about 7000 feet altitude by April 8. Specimens collected April 14.

Psaltriparus minimus minimus. Coast Bush-tit. Adult male collected by Ora A. Willett on brushy mountain side at 7000 feet altitude April 15, 1934. An unusually high altitude for spring.—G. WILLETT, *Los Angeles Museum, Los Angeles, California, April 27, 1934.*

Nuttall Poor-will on the Oregon Coast.—On October 27, 1933, a small boy shot a poor-will at a beach resort near the mouth of the bay at Netarts, Tillamook County, Oregon. It was nearly a week later that the bird came into my hands through the kindness of Mr. Clarence Edner of Netarts, and though by that time in very poor condition it was nevertheless preserved as a study skin (field number 9337). It proved to be a young female. Dr. Joseph Grinnell identified the specimen as *Phalaenoptilus nuttallii nuttallii*,—"in other words the race of the Great Basin and Rocky Mountain region," and he further remarks "it is thus hard to imagine how so young a bird (outer primaries not yet fully emerged) could have gotten so far from the breeding ground of that race—unless its parents had themselves been pioneers far to the westward across the Cascades." So far as I know, the poor-will has not previously been noted in this part of the state.—ALEX. WALKER, *Tillamook, Oregon, March 25, 1934.*

Goose Footprints on a Pliocene Mud-flat.—Upon a ripple marked mud-flat a goose of ancient times left record of its ramblings. Soon the impressions of its feet were buried and later cast in the forming shale and sandstone. Today the old mud-flat, that once was part of river delta or lake shore, stands at a steep angle in a road cut at Saint Mary's College, Moraga Valley, Contra Costa County, California. Spread