

Images of 100 red cells were traced at 3000 \times magnification. From these tracings, I measured the area by planimeter, and circumference by a map-measurer, and found an average surface of 3017 square micra, and an average volume of 3306 cubic micra for the erythrocytes.

The packed-cell volume of the whole blood is 25.5 per cent (average of 8 tubes). Hemoglobin content is 4.2 grams per 100 cc. of blood (average of four tests).

Blood cells were mixed with isotonic NaCl solution, and tested by the test-tube method versus human serums as follows:

Anti C serum	No agglutination
Anti D serum	No agglutination
Anti E serum	No agglutination
Anti c serum	No agglutination
Anti A serum	No agglutination
Anti B serum	No agglutination

There was no absorption of the human antibodies by *Necturus* blood cells. This was proved by centrifuging the above mixtures, removing the supernatant serum, and then adding to it human red cells containing the antigen for which the various sera were specific. Agglutination occurred in each case, demonstrating that the antibody was still in the serum.

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Ornithological Notes

MICROFILARIAE, A POSSIBLE CAUSE OF DEATH IN THE BRONZED GRACKLE, *Quiscalus quiscula versicolor* Veillot.—About three miles S and one mile E of Lawrence, Kansas, is a dense bois d'arc thicket with trees of nine to ten feet, covering about 18 acres. Each fall and spring this area serves as the roosting site for hundreds of thousands of birds in migration, mostly blackbirds of several species. I estimated that on the night of April 19, 1951, for example, some 113,000 birds roosted there. Of these, about 75,000 or 66% appeared to be bronzed grackles; and the rest were mainly cowbirds and red wings. On examination, I found in the area several dead or dying birds, all bronzed grackles, and with no apparent injury.

I set up a transect through the area and on the three following mornings diligently searched this transect. All dead or dying birds (all grackles) were collected, and were refrigerated at a low temperature to prevent decomposition. Five of them were sent to Dr. Robert W.

Menges of the U.S. Public Health Service in Kansas City, Kansas, for autopsy. No gross lesions were found in the viscera of any of the birds. Hearts, livers, gizzards, and lungs were subjected to histo-pathological study and blood smears were made for each bird.

Numerous microfilariae were found, however, in blood smears of all the birds (grackles) examined. As no other infectious agent was observed, it seems that this parasite may have caused the deaths of the birds. No adult worms could be found. The microfilariae were 3.2-4.8 micra in width and 144-149 micra in length. Both ends were blunt, with one end slightly more obtuse than the other. No sheath was evident. The identity of the parasite is at present unknown.—

William B. Stallcup.

OBSERVATIONS ON A PARTIALLY-WHITE ENGLISH SPARROW, *Passer domesticus domesticus* (L.).—Reports in ornithological literature concerning albino- or partially-white birds are not rare. Few of these reports, however, include details of the actual coloration or of the behavior of such individuals.

In Lawrence, Kansas, during the springs of 1951 and 1952, I observed at close range a partially-white English sparrow which came regularly to feed in my yard. Food placed near my window brought the bird close enough to permit accurate observation.

Most of the contour feathers of this individual were white. There was a brownish horizontal stripe through each eye and a faint black wash on the throat and upper breast. The bird was probably a male, for that sex normally possesses black feathers in this area. The primary and secondary feathers were brown, as were also the tail feathers (except for the outermost ones). The wings were very conspicuous against the white body in the resting bird. When the bird took flight, however, they became less conspicuous; and one had the impression of a bird almost completely white. The bill was of normal coloration, as were also the eyes. Feet and legs, however, seemed to lack the normal amount of pigment, and appeared much pinker than those of other sparrows. The song and call were normal.

This bird was observed always in the company of other sparrows. It seemed more attentive than the others to disturbing elements of the environment. It moved about nervously, and was the first to take flight when the flock was disturbed. Although allowed to travel with the flock, it was apparently low in the social order, being chased by the other birds and always giving ground under such circumstances.

On several occasions during the summer of 1951, I saw the bird at a distance, but was not able to determine whether it had been able to obtain a mate and nest. I did not see it again after the spring of 1952.

—William B. Stallcup.

The Bluebonnets (Lupinus) of Texas

Lloyd H. Shinnery

By act of the legislature, *Lupinus subcarnosus* was designated the official state flower of Texas. Most of the bluebonnets in the state are thereby excluded from recognition as state flowers, a consequence of lack of sufficient taxonomic study. When the conservative opinions of a Sereno Watson and the exceedingly liberal ones of a Charles Piper Smith agree in treating our two most widespread annual species as a single one, it may seem ultra-Rafinesquian to resurrect any names from synonymy. Nevertheless there are several