

Surf Scoter in New Mexico.—On 30 October 1959, while driving north on U.S. Highway 85 two miles south of Los Lunas, Valencia County, New Mexico, I saw a car strike a dark-colored bird. The bird was examined and found to be an immature female Surf Scoter, *Melanitta perspicillata*. Examination indicated that the bird was already dead when struck by the car. The weather in the area as well as to the west into Arizona and California had been severe during the two previous days, with wind, and precipitation of over one inch. A study skin of the bird has been prepared and is in the collection of the New Mexico Department of Game and Fish. This appears to be the first reported occurrence from New Mexico.—WM. S. HUEY, *Box 4201, Santa Fe, New Mexico.*

Subspecific Names of Mexican Brown Jays: A Correction.—At the conclusion of a recent analysis of polymorphism in *Psilorhinus morio* (Auk, 76: 385–417, 1959), I apparently erred in assigning racial names to northern populations. Following current usage (cf. Davis, Condor, 53: 152–153, 1951), the name *Pica morio* Wagler (Isis von Oken, 1829: col. 751) [= *Psilorhinus morio morio* (Wagler)] was applied to the monomorphic brown population distributed from Tamaulipas and Nuevo León south to central Veracruz, while the name *Pica fuliginosa* Lesson (Traite d'Ornith., livr. 5: 333, 1830) [= *Psilorhinus morio fuliginosus* (Lesson)] was applied to the polymorphic population ranging from the coastal plain of central Veracruz south and east to Tabasco and Chiapas. Nomenclaturally, this would be correct, if, as formerly believed, the type locality of *P. morio* Wagler were Jalapa, Veracruz. But Stresemann (Condor, 56: 89, 1954) has indicated that the type actually came from Alvarado, on the gulf coast about 37 miles southeast of Veracruz City. Since Alvarado lies well within the range assigned to the polymorphic subspecies, this race must be known as *Psilorhinus morio morio* (Wagler).

For the northern monomorphic brown race, the name *Psilorhinus morio palliatus* van Rossem (Bull. Mus. Comp. Zool., 77: 415, 1934) is available. *P. fuliginosa* Lesson, with type locality "Mexique," could be considered to apply to the northern race; but, since this name has always been used for southern birds, it seems desirable to consider it a synonym of *P. morio* Wagler, as van Rossem (*loc. cit.*) has already suggested. The type of *P. fuliginosa* is no longer available for examination, and its precise locality of collection cannot be determined. To settle the matter once and for all, I hereby designate Coatzacoalcos (Puerto México), Veracruz, as restricted type locality of *P. fuliginosa* Lesson.—ROBERT K. SELANDER, *Department of Zoology, University of Texas, Austin, Texas.*

Some Observations on the Distribution of the Blood Capillaries in the Pigeon Breast Muscle.—The *pectoralis major* of the pigeon is a mixed type of muscle, in which the red and white fibers, which are structurally as well as physiologically well-defined and distinct types, exist side by side. The red fibers, narrower in diameter, are loaded with fat, whereas the white fibers, broader and poor in fat, are loaded with glycogen (George and Naik, Nature, 181: 709–710, 1958; Biol. Bull., 116: 239–247, 1959). The red color of the narrow, red fibers is due to the presence of oxygen carriers like myoglobin and cytochromes, which in the white fibers appear to be absent and if at all present, only in extremely low concentration. Since the mitochondrial content of the red fibers is also much higher than that of the broad fibers (George and Naik, Nature, 181: 782–783, 1958), the oxidative processes are much better developed in the red fibers than in the white

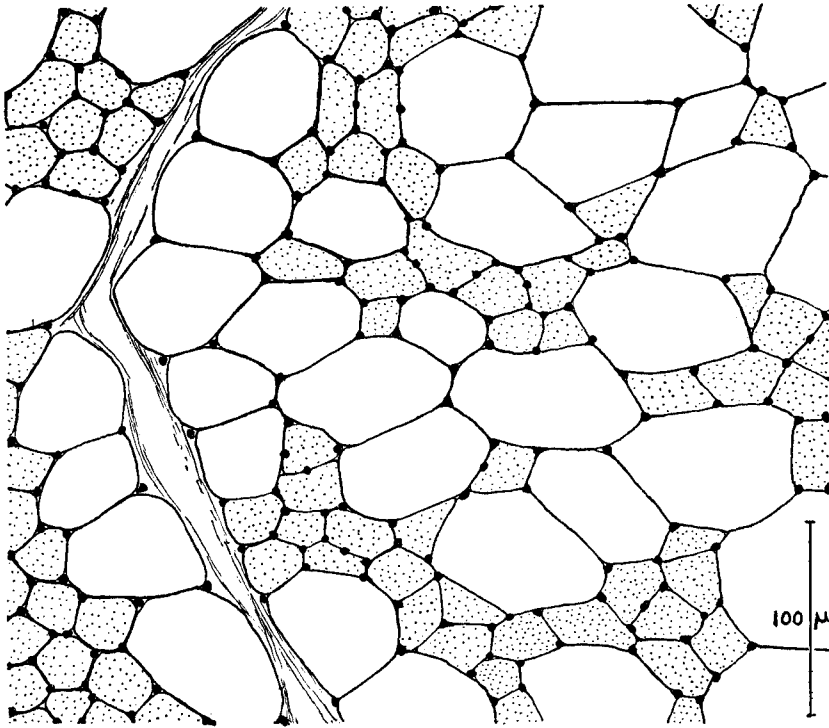


Figure 1. *Camera lucida* sketch of t.s. of the *pectoralis major* of the pigeon injected with India ink to demonstrate the distribution of blood capillaries (seen as solid, dark dots at the periphery of the muscle fibers). The red, narrow fibers are shown dotted, while the white, broad ones are clear.

ones. In the light of these observations, the distribution of the blood capillaries in the *pectoralis major* of the pigeon should be of considerable interest.

Dilute India ink was injected into the heart of several anaesthetized pigeons. After allowing the ink to circulate for a short time, the skin over the *pectoralis* was removed, and the bird was immersed in 10 per cent neutralized formalin for an hour, at the end of which small pieces of the *pectoralis major* were cut out and immersed in fresh formalin solution for 24 hours and then embedded in gelatin for sectioning according to the method of Clark (J. Path. Bact., 59: 337, 1947).

The accompanying figure shows the distribution of blood capillaries as seen in a cross section. Each fiber, red as well as white, is in contact with about five-six blood capillaries. Due to the bigger size, the surface area per unit volume of the broad fiber (diameter 69μ) is considerably less than that per-unit volume of the narrow fiber (diameter 30μ). With the number of capillaries surrounding a broad fiber about the same as that around a narrow fiber and the diameter of all the capillaries and rate of flow of blood through them presumed to be the same, it

can be concluded that the rate of supply of oxygen per gram weight of the narrow fibers is much higher than that per gram weight of the broad fibers.

The investigations of George and Jyoti (J. Anim. Morph. Physiol., 4: 119-123, 1957) on the *pectoralis major* of some flying birds show that fat is the chief fuel during long and sustained activity in these birds. It is well known that, on oxidation of an equal amount of fat and glycogen, over double the energy is obtained from the former than from the latter. It is also well known that the oxidation of fat not only demands considerably more oxygen but also that the utilization of fat for energy, unlike that of glycogen, is not possible in absence of oxygen. A partial breakdown of glycogen with release of energy can occur under anaerobic conditions, whereas the conversion of fat is strictly an aerobic process. In the pigeon breast muscle the narrow fibers, which are more numerous, are ideal sites for fat utilization. On the other hand, glycogen should form the chief fuel for the contraction of the less-numerous broad fibers, which are supplied with oxygen at apparently lower rate and are poor in mitochondrial content. If this is the case, the contribution of the white fibers during long and sustained flight should be very small; but on the other hand, they should well be able to perform a short series of quick and powerful contractions expending considerable energy, as may be expected during a take off when the wing beats are liable to be faster and more powerful.—J. C. GEORGE and R. M. NAIK, *Department of Zoology, M. S. University of Baroda, Baroda 2, India.*

The Brown Cachalote, *Pseudoseisura lophotes*, in Bolivia.—The Brown Cachalote, *Pseudoseisura lophotes* (Reichenbach), is a well-known furnariid of northern Argentina and western Uruguay. It is about 10 inches long, crested, and generally rufous in color, and is notable for its domed stick nest "the size of a barrel," "made with enough material to fill a barrow" (Hudson, Birds of La Plata, 1: 232, 1920).

In Reichenbach's original description of *Homorus lophotes* (Handb. spec. Orn., cont. x, Scansoriae A. Sittinae: 172, 1853), the origin of his type specimen was given as "Bolivia" with a query. I have been unable to determine why Reichenbach questioned the source of this type (which was destroyed in World War II). Hellmayr (Cat. Bds. Americas, 4: 183, 1925) considered "Bolivia" as "no doubt incorrect," and Peters (Check-list Bds. World, 7: 122, 1951) called it "probably erroneous." These later authors may well have considered "Bolivia" an erroneous locality not only because of Reichenbach's query, but because the species was not otherwise known from the country of Bolivia. It is not listed in any of the major papers on Bolivian birds.

Carnegie Museum possesses four specimens of *Pseudoseisura lophotes* collected by José Steinbach on 23 and 25 August 1909 and 25 September 1915, at Guanacos, Province of Cordillera, Dept. Santa Cruz, Bolivia (approximately 32 km. east-southeast of Cabezas), altitude 700 meters. These appear to be the only known Bolivian specimens of the species, but they serve to prove that the Brown Cachalote does, indeed, occur in Bolivia. The four specimens have been compared with 39 from Argentina, representing the combined Carnegie Museum and American Museum of Natural History series, and prove to be subspecifically separable. It is conceivable that *Pseudoseisura lophotes* may ultimately be found to occur elsewhere in Bolivia, and it thus seems desirable to establish a restricted type locality for nominate *lophotes*. I therefore so designate Guanacos, the one Bolivian locality from which the species is now known.