black and red. The unexpected appearance of the dun and yellow birds is satisfactorily accounted for on the assumption that she was heterozygous, as follows:

Parents: black ♂ = *fBI·fbi*
red ♀ = *fbI·Fbi*
Gametes: ♂, *fBI*, *fBi*, *fbI* and *fbi*
♀, *fbI* and *Fbi*
Combinations: *fBI·fbI* = black ♂
fBI·Fbi = black ♀
fBi·fbI = black ♂
fBi·Fbi = dun ♀
fbI·fbI = red ♂
fbI·Fbi = red ♀
fbi·fbI = red ♂
fbi·Fbi = yellow ♀

That is, 2 black males: 1 black female: 2 red males: 1 red female: 1 dun female: 1 yellow female.

While the number of offspring is too small on which to base any conclusion as to proportions, it will be noted that all so far obtained fall in line with the expectations as to color and sex.

The foregoing may provide an explanation of the interesting observations of R. M. Strong on the sex of ring-doves,[4] and those of Bonhote and Smalley (*loc. cit.*, p. 617, footnote), as well as possibly those of Whitman reported by Riddle.[5]

[P. S., July 22, 1912. Since the foregoing note went to press there has appeared in the June, 1912, number of the *Journal of Genetics* (Vol. 2, No. 2, p. 131) a paper by Mr. R. Staples-Browne, in which the relation of blue and silver to sex is amply demonstrated.]

LEON J. COLE

THE INTERTUBERCULAR OR BICIPITAL FORAMEN OF THE HUMERUS OF THE GUINEA-PIG

THE upper extremity of the humerus of the guinea-pig often has an unusual, probably an unique, structure. A broad and thick bridge connects the large and small tubercles and converts the intertubercular sulcus into a foramen through which passes the tendon of origin of the *m. biceps*. At the last meeting of the Association of Anatomists, I reported that among twenty skeletons studied, four humeri from three individuals, two males and one female, were found which had this peculiar structure. Recently, through the kindness of Professor Castle and Dr. Detlefsen, of the Bussey Institution, I have been allowed to study their large collection of guinea-pig skeletons and was surprised to find the remarkable prevalence of the intertubercular foramen. Out of a total of 125 humeri, 17, 13.6 per cent., have complete foramina. Besides these 23 others, 18.4 per cent., have nearly complete bridges over the intertubercular sulci. In six instances, this bridge is formed by a small supernumerary bone which is wedged in between the great and small tubercles; in the others, by small acute processes which project toward each other from the adjacent sides of the tubercles. One or two similar but smaller processes occur upon 50 humeri, 40 per cent. of the total number, the remaining 35 bones, 28 per cent., having no indication of the foramen.

All of the skeletons used are of adult or subadult animals, but as the growth of the guinea-pig continues long after sexual maturity, possibly throughout life, it is probable that had the animals been older, an even larger proportion of complete foramina would have been present.

In all cases, the foramen has the same character. The upper edge of the bridge is convex, its lower edge concave. The canal-like foramen is narrow above, but rapidly widens below and terminates in an oblique, flaring and funnel-shaped mouth which is surrounded by a rough, slightly elevated, lip.

It seems impossible to correlate the occurrence of the intertubercular foramina with sex, age or muscular development. Foramina do not occur in immature animals, but, on the other hand, they are absent in certain very old animals (three or four years old) and furthermore they are occasionally present upon one side only.

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[4] SCIENCE, N. S., Vol. 33, p. 266, 1911.
[5] SCIENCE, N. S., Vol. 35, p. 462, 1912.