

extensor hallucis longus is absent in *Gavia*, *Podiceps*, and *Uria*. *M. extensor proprius digiti III* is absent in such distantly related birds as *Fregata*, *Grus*, *Tyrannus*, *Corvus*, and *Sturnus*. *M. adductor digiti II* is absent in *Pediocetes*, some cuckoos, *Colaptes*, *Dendrocopos*, *Tyrannus*, *Paradisaea*, *Corvus*, *Fregilupus*, *Sturnus*, *Aplonis*, *Artamella*, *Vireo*, *Junco*, etc. Is *M. extensor brevis digiti IV* absent in all woodpeckers and passerines?

The full muscle formula as found in a galliform bird, for example, would be ABCDEFGXYAmV. We may tabulate these as follows:

Code Letter	Name of Muscle
A	Piriformis, pars caudofemoralis (= femorocaudal)
B	Piriformis, pars iliofemoralis (= accessory femorocaudal)
C	Iliotrochantericus medius
D	Gluteus medius et minimus (= "piriformis" of Fisher)
E	Iliacus (= "psoas" of Fisher) ¹
F	Plantaris
G	Popliteus
X	Semitendinosus (= "flexor cruris lateralis" of Fisher)
Y	Accessorius semitendinosi
Am	Ambiens
V	Vinculum between the tendons of Mm. flexor perforatus digiti III and flexor perforans et perforatus digiti III ²

¹ *M. iliacus* of Fisher equals *M. iliotrochantericus anterior* of Hudson and Berger.

² It should be noted that the vinculum mentioned by Garrod, Forbes, Beddard, and Gadow usually pertains to the band that connects the tendons of Mm. flexor hallucis longus and flexor digitorum longus and which is found in most non-passerine birds. The vinculum of the formula above is far more variable among birds.

When the information above is available for all families of birds, we shall have a much better understanding of the significance of muscle formulae in determining the relationships among birds. I grant that this is a sizable list of symbols, and that the skeptic might counter with the statement that anatomists soon will propose that the entire alphabet be used in muscle formulae. However, I submit that systematists might better ignore muscle formulae entirely than to continue to use only Garrod's abbreviated formulae of AXYAm and ABXYAm.—ANDREW J. BERGER, *University of Michigan Medical School, Ann Arbor, Michigan, November 8, 1958.*

Tufted Titmouse feeding on a shrew.—On February 20, 1958, in the backyard of my parents' home in Van Buren County, Michigan, I watched a Tufted Titmouse (*Parus bicolor*) eating bits of flesh which it picked from a Masked Shrew (*Sorex cinereus*) during a heavy snowfall. The bird had lodged the little mammal in a forked branch of a small shrub just above the ground and was holding it there by one foot while clinging to the branch with the other. As I approached to a distance of about 10 feet the bird flew to a nearby apple tree with the shrew in its bill and continued feeding. I was not able to determine whether the titmouse had captured the mammal alive or found it dead.

An examination of pertinent literature failed to disclose any mention of this species including small mammals as part of its diet. Perhaps the greater than average snowfall had created a decline in the availability of the regular food supply and caused the bird to turn to such an unusual meal.—RICHARD C. FLEMING, *136 E. Battle Creek Street, Galesburg, Michigan, May 15, 1958.*