

**BIOMORPHOLOGICAL FEATURES OF BONES OF HIP JOINT AND MUSCLES THAT ACT ON IT IN SOME REPRESENTATIVES OF THE ORDER GRUIFORMES - ORDO GRUIFORMES**

Biomorphological features of hip bones of *Gruiformes*, like other birds, are caused by specific bipedal locomotion, which is based on the location of the body axis relatively to the pelvic limb and the length of femur relatively to the total length of the pelvic limb, which ranges from 14,6 to 63,0%. Among *Gruiformes*, the difference in the development of bone structures that form the hip joint, namely the form of iliac, pubic bone and the sciatic due to biomorphological adaptations of birds to habitat under the influence of Earth's gravitational field, is clearly marked. The presence or in varying degrees of severity sciatic-pubic window (absent in *Grus antigone*), different shape and size of the articular hole, the ratio of width to height of which varies from 64,5 to 130,5%, are caused by the influence of functional loads on particular areas of these during locomotor movements. The difference in the development of the distal half of the os femoris is directly proportional to the length of the pitch of different species of birds and fixation to it more or less developed muscles.

Radiographic study of the proximal half of the femur and articular cavity of pelvic bone in some investigated *Gruiformes* (*Anthropoides virgo*, *Balearica regulorum*, *Grus grus*, *Grus antigone*, *Porphyrio porphyrio*, *Otis tarda* et *Gallinula chloropus*) shows a variety of their internal structure, location and thickness of compact substance, and also branching of trabeculae of spongy substance caused by functional activities, which depend on the type of support and means of transport on the substrate. Some differences in the distribution of functional loads on the glenoid cavity of pelvic bone lead to formation of 4 types of location of compact and spongy substance: compact, densely-compact, compact-tight and dense, at *Gruiformes* – densely-compact. The presence of thicker or thinner compact substance from either side of the femur indicates larger or smaller load on one or other side of the bone. This thickness in the investigated *Gruiformes* varies in the lateral surface from 9,0 to 20,7%, in the medial – from 9,4 to 13,8%. It is established that the ratio of the total mass of muscles acting on the hip joint to the total body weight of each studied bird ranged from 0,4 to 1,3%.

The degree of development of individual muscles and muscle groups of the hip joint, and the degree of their differentiation are caused by the influence of functional loads as a result of biomorphological adaptation to a particular type of support and means of transport in habitat, particularly for *Gruiformes*, walking is a characteristic type of movement. The ratio of mass of muscles among *Gruiformes* in flexion-abducting group ranges from 39,3 to 84,7%, extensor-adducting – from 15,3 to 60,7%, adducting group – from 0,4 to 0,5%.