

A725 Compositions of Amino Acid of 6 species in Family Ardeidae

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The compositions of amino acid from thoracic muscle were investigated in 6 species, *Bubulcus ibis*, *Adrea alba*, *Nycticrax nycticorax*, *Adrea cinerea*, *Ixobrychus eurhythmus* and *Butorides striatus* in the family Ardeidae. 18 kinds of amino acids were found and they were Glutamic acid($13.24 \pm 0.47\%$), Glycine($10.41 \pm 1.27\%$), Lysine($9.21 \pm 0.54\%$), Leusine($8.47 \pm 0.36\%$), Alanine($8.18 \pm 0.14\%$), Aspartic acid($8.15 \pm 0.15\%$), Ammonia($6.22 \pm 1.18\%$), Valine($5.70 \pm 0.30\%$), Arginine($4.90 \pm 0.12\%$), Isoleucine($4.54 \pm 0.17\%$), Threonine($4.54 \pm 0.07\%$), Serine($4.35 \pm 0.14\%$), Phenylalanine($3.51 \pm 0.25\%$), Methionine($2.08 \pm 0.35\%$), Tyrosine($2.02 \pm 0.26\%$), Histine($1.42 \pm 1.39\%$), Cystine($0.51 \pm 0.12\%$) and Proline($0.30 \pm 0.03\%$), in order of high contents. By the species, the contents of essential amino acids of *Bubulcus ibis*, *Adrea alba*, *Nycticrax nycticorax* were 47.87, 46.56, 46.74% respectively and they were higher than 41.47% for *Adrea cinerea*, 42.69% for *Ixobrychus eurhythmus* and 40.92% for *Butorides striatus*. These differences were thought to come from the difference in Histine and Lysine contents.

A726 Damage Survey to the Fruits by the Magpie(*Pica Pica sericea*) from Korea

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To evaluate fruit damages caused by magpie(*Pica pica sericea*), we investigated them in Kyongbuk province, Korea, in 1998. The damages came out in all kind of fruit tress and especially, heaviest in apples that cultivate everywhere in Kyongbuk province. In the bird damages by the tree heights and shapes, the damage rate was highest on the middle of tree, having much fruits in the low-height and spindle shaped trees(less than 2.5m in tree height), but in the high-height and central leader shaped trees(more than 3.0m in tree height), the rate was highest on the top of tree in spite of its fewer fruits. On the comparison of fruit characteristics between injured fruits and non-injured fruits, there was no differences in fruit weight and coloration between them and no significance in correlation between fruit damage rate and the other fruit characteristics. Therefore, we concluded that the magpie prefer feeding position that serve convenience in feeding fruits to fruit qualities.