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The inner toe of Megatriorchis, Erythrotriorchis and Harpyopsis

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Certain species of the Accipitridae, the milvine kites (Milvus, Haliastur, Haliaeetus, etc.), have the first and second basal phalanges of the inner toe (digit II) fused into a single unit. Though this has been known for some time and has been used as a taxonomic character in this group, Olson (1982) was the first worker to investigate the distribution of this character in a systematic manner. He was able to examine skeletons, and as needed, dissect alcoholic and skin specimens, for representatives of all but 7 accipitrine genera. Among these 7 omissions are 3 monotypic Australasian taxa: Harpyopsis, Erythrotriorchis and Megatriorchis.

While we had no skeletons of these genera available, we were able to check for the presence of fused phalanges by X-raying the feet of prepared skins. In 2 specimens each of Erythrotriorchis radiatus and Harpyopsis novaeguineae and one of Megatriorchis doriae, the bones of digit II were unfused. This result is not unexpected since none of these genera has been considered closely related to the milvine kites. As a comparison, a skin of one milvine species, Milvus milvus (a species not examined by Olson), was included; fusion was found in digit II. While these findings do not shed new light on relationships among the diurnal raptors, they do help complete Olson's survey of this character.

This exercise also demonstrates the usefulness of X-ray as an alternative technique when skeletons or dissection specimens are not available. We employed a very fine paper, for which settings of 30 kV and 5 mA with an exposure of 50 seconds at one metre gave satisfactory results, although we do not claim that these are optimal; further investigation may yield better parameters and these may vary according to the equipment and paper and to the size and configuration of the specimens. We recommend that the remaining genera which were unavailable to Olson be examined in this manner.

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