Muscles of the Neck, Trunk and Tail in the Noisy Scrub-bird, *Atrichornis clamosus*, and Superb Lyrebird, *Menura novaehollandiae* (Passeriformes: Atrichornithidae and Menuridae)

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ABSTRACT. Muscles of the neck, trunk and tail of the Noisy Scrub-bird, *Atrichornis clamosus*, are described, illustrated and compared with those of the Superb Lyrebird, *Menura novaehollandiae*. It is proposed that hypertrophy of various neck muscles in *Atrichornis* is related to use of the head in penetrating litter and undergrowth. *Atrichornis* and *Menura* are shown to have qualitative differences in myology and in morphology of the uropygial glands, but taxonomic interpretation of these differences is judged to be premature without broader comparisons.

ZUSI, R.L., 1985. Muscles of the neck, trunk and tail in the Noisy Scrub-bird, *Atrichornis clamosus*, and Superb Lyrebird, *Menura novaehollandiae* (Passeriformes: Atrichornithidae and Menuridae). Records of the Australian Museum 37(4): 229-242.

KEYWORDS: myology, neck, trunk, tail, *Atrichornis, Menura*, Passeriformes.

The Noisy Scrub-bird, *Atrichornis clamosus* (Gould), is an endangered species of passerine bird restricted to Western Australia. The only other species in the genus, *Atrichornis rufescens* (Ramsay), occurs in eastern Australia. Until recently, little was known of the internal anatomy of either species, except for the structure of the syrinx, some peculiarities of the skeleton and notes on the myology of the shoulder (Fürbringer, 1888). In this paper I describe the skeletal myology of the neck, trunk and tail, from a single specimen of *Atrichornis clamosus* (adult female, Western Australian Museum A15926). Muscles of the tongue, jaws and appendages of that specimen have been described elsewhere (Bock, 1985; Raikow, 1985). In addition, I present comparative comments on the Superb Lyrebird, *Menura novaehollandiae* Latham, based on my dissection of a single specimen (adult female, Carnegie Museum Alc1834).

My primary purpose is to place the myological data from these specimens on record for comparison with other species. It is beyond the scope of this paper to make a critical appraisal of the phylogenetic relationships of *Atrichornis* because there is no existing body of data on these muscles for comparison. Such a study would require dissection of species from many oscine and suboscine families and subfamilies.

It is ironic that *Atrichornis* should be the subject of the first exposition of the trunk and tail muscles in a passerine bird since that of Shufeldt (1890) who described most of these muscles for the Common Raven, *Corvus corax* Linnaeus. Unfortunately his work is not always adequate for comparison with other species. Muscles of the trunk of the American Crow, *Corvus brachyrhynchus* Brehm, were illustrated but not described by Hudson & Lanzillotti (1955). Several studies have dealt with passerine neck muscles: Shufeldt (1890) described the Common Raven (Corvidae); Palmgren (1949) compared a few species from the Paridae, Certhiidae, Sylviinae, Turdinae and Carduelinae; and Burton (1974) described the Callaeidae. Boas (1929) and Kuroda (1962) treated passerines only incidentally.

Palmgren (1949) interpreted most differences among the several families he dissected as adaptations for foraging. The differences are mainly in the relative sizes of muscles, in the numbers of slips of complicated muscles and in the vertebrae on which they attach. I have drawn tentative conclusions about the adaptations of *Atrichornis* based on limited comparisons of such differences.

MATERIALS AND METHODS

Dissection was done entirely under a dissecting