

Beside the Creation's Crowning Glory – Anatomical Structures of Non-Human Vocalization.

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Although the human ability for speech is probably the most prominent example of acoustic communication, in many species acoustic communication was evolved by natural selection. Apart from intellectual requirements, the anatomy of the human larynx und vocal tract seems to be highly adapted to produce a huge variety of sounds. But what about adaptations found in other vocalizing species? In order to understand the functional morphology of the human voice producing system, we are in need of data on the vocal tract anatomy of the other species. Unfortunately, our knowledge of the head and neck anatomy of almost all wild living species is still sparse.

This contribution presents morphological studies of the vocal tract anatomies of the Chinese Muntjac (*Muntiacus reevesi*), the Muscox (*Ovibos moschatus*), the Takin (*Budorcas taxicolor*), and the Mongolian Gazelle (*Procapra gutturosa*). In the respective social systems of all of these species, the vocalization plays an important role. In addition to the anatomical investigations, some typical calls of the particular species were analyzed acoustically.

At the end of the presentation, possible pathways to translate the physiological data into a physical model are discussed by involving the audience.