MORPHOLOGICAL STUDY ON SPECIALIZED SKIN GLANDS OF THE SIKA DEER (*Cervus nippon yezoensis* H.) WITH SPECIAL REFERENCE TO THE CAUDAL GLAND

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The presence of specialized skin glands and their morphological characteristics were clarified in Sika deer.

In Sika deer, the preputial gland, metatarsal gland and caudal gland were confirmed, but no forehead, interdigital and infraorbital glands were found.

The caudal gland was a large gland, occupying the greater part of the tail. It was a modified apocrine sweat gland showing a compound tubular gland structure.

The caudal gland cells contained abundant eosinophilic granules in their cytoplasm. Their nuclei were located near the lumen. The lumina were filled with an eosinophilic milky secretion.

Three types of secretory granules and intercellular canaliculi were electron microscopically identified.

Six types of terminal portions were classified by their histological features: undifferentiated, immature, secretion A, secretion B, colloidal and nonsecretion types. The first two types showed no or little secretion, while the other four types showed active secretory function. The secretion B type was the most active in secretion.

Various types of secretory functions were found for the first time in the tissue of a 3-month-old fawn, in which secretion seemed to have begun. At 20 months old, the rate of each secretory type showed regular seasonal change.

The rate of the secretion B type was the highest in adult pregnant deer, and the rate of the colloidal type, characterised by a colloidal substance in cytoplasm, increased in bucks during rutting season.

It was noted that female caudal glands, especially during pregnancy, were larger than those of males. These results suggest that the deer caudal gland is regulated by sex hormones.