Histological changes in rumen epithelium of reindeer calves during the winter season

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Abstract: Histological samples were taken from five different parts of the rumen from six reindeer calves in December (Group 1) and from six 1 year old calves in April (Group 2). A digitizer was used to measure the thickness of different cell layers in the rumen papillae. Individual variations were great, but some differences could be seen. The whole epithelium was thicker (P< 0.05) in animals belonging to Group 1. This was due to thicker stratum granulosum (P< 0.01) and other cell layers excluding stratum basale. Thickness ratio stratum basale: other cell layers was lower (P< 0.05) in Group 1. These results indicate that the epithelium of rumen of reindeer calves becomes less active during the winter.

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