

Nasal salt gland in dinosaurs

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Large, herbivorous dinosaurs display, as a rule, enlarged external nostrils. It is considered here, that they accommodated large functioning salt gland homologous with the lateral nasal gland of Recent reptiles and birds. All dinosaurs were probably uricotelic animals which had to use the extrarenal way of excreting excess of monovalent ions. It is suggested here that they were able to use the nasal salt gland for this purpose. Its presence may have been especially important for unloading the excess of potassium ions ingested by large herbivores with their vegetarian food, orland for getting rid of sodium ions - by herbivores living in saline environment. An alternative is also given, that the development of large functioning salt gland may have been exclusively a result of large body size and consequently of large amount of potassium ions ingested, independent of fresh water availability in the environment.

Key words: Dinosaurs, paleoecology, physiology, nasal salt glands.

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