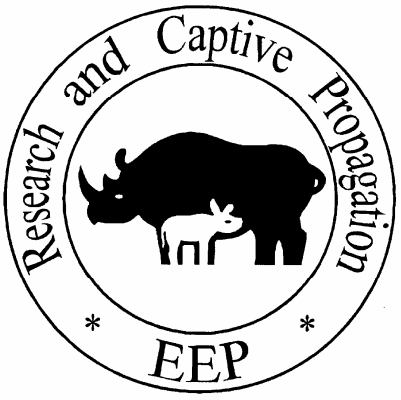
Research Committee Newsletter
11th Issue, September 2008

edited by Udo Ganslosser*



CONTENTS

*Contact: udo@ganslosser.de

ARTERIES OF THE HEAD OF THE WHITE RHINOCEROUS (CERATOTHERIUM SIMUM, BURCHEL,1817)

HIERONIM FRĄCKOWIAK
Department of Animal Anatomy, Agricultural Univeristy of Poznan, Wojska Polskiego 71C, 60-625 Poznań. Poland, email. hierofro@au.poznan.pl

The aim of the study was the comparative analysis of the arteries of the head of the white rhinocerous, represented Rhinocerotidae family. Corrosive preparation of the arteries of the head of the white rhinocerous female was studied. The age of these specimen was 3,5. Common feature of the arteries of the head of white rhinocerous and all Perissodactyla is the way of the terminal division of the common carotid artery. In white rhinocerous the lingual artery and the facial artery, depart seperately from the arterial trunk, like in other animals of Tapiridae family. Arterial rete mirabile of the white rhinocerous is only one case recorded at the Perissodactyla order. This is also distinguishing mark of the Rhinocerotidae family.

MORPHOLOGY OF THE SKULL OF THE GIRAFFE (GRAFFA CAMELOPARDALIS L.) IN RELATIONSHIP TO THE PHYLOGENY OF THE SPECIES

HIERONIM FRĄCKOWIAK & HUBERT JAKUBOWSKI
Department of Animal Anatomy, Agricultural Univeristy of Poznan, Wojska Polskiego 71C, 60-625 Poznań. Poland,email: hierofro@au.poznan.pl

The aim of the study was the analysis of the cranial structures of the giraffe and the confirmation of the phylogenetic relationship between giraffes and selected representatives of the hoofed mammal family.

Craniological relationships of 12 various giraffe skulls from the Department of Animal Anatomy were studied. The age of the animals differed. Selected craniological features of the giraffe skulls were investigated. These features were compared with the skulls of selected hoofed mammals. Identified features of the skulls are stated to be similar to that of Ruminants. Most of these features suggested a quite large similarity between giraffe, deer and cattle, which also suggested close affinity of their taxons. Lesser, but an observable similarity to the giraffe skull was the relationship to sheep and goat. Especially in the lateral and basal parts of the skull. Emissary foramina and shape of the nuchal plate were similar in the pronghorn antelope. The position of the facial crest was the one single analogy also observed in the pig. In the horse, the shape of the nuchal plane was closely related and in the camel the general shape of the skull was also similar.

DISTRIBUTION AND MICROSTRUCTURE OF THE LINGUAL PAPILLAE IN THE INDIAN ELEPHANT

HANNA JACKOWIAK & SZYMON GODYNICKI.
Department of Animals Anatomy, Agricultural University of Poznań, ul. Wojska Polskiego 71C, 60-625 Poznań.

The present study investigated the morphology and distribution of the lingual papillae in the Indian elephant. The macroscopic am microscopic studies were performed on the tongue of the 50 years old female called Kinga from Zoological Garden in Poznan. The tongue after dissection was measured and tissue samples were fixed by embedding in 10 % formalin. For the LM microscopy the histological slides were stained with Masson Goldner and PAS staining and documented in Zeiss Axioscope Plus LM microscope.

Tongue of the Indian elephant have an elongated immobile body, closely filled the space between bodies of mandible. The length of the tongue is ca. 48 cm and width of the lingual body is about 14-18 cm. Thickness measured on the body of the tongue is ca. 28 – 30 cm. The dorsal surface of the tongue is flat and covered by multilayered squamous epithelium of thickness ranges from ca. 400 um on the apex of the tongue to ca. 5-6 mm on body of the tongue. The most characteristic feature of the tongue is triangle in a shape of apex of the tongue, which fill the sulcus of the mandible. Length of the apex from their tip to the dorsal surface of the tongue is about 24 cm. The mechanical papillae are scarce and on the anterior part of the tongue represented by short filiform papillae with one keratinized process. The lingual gustatory papillae are represented by fungiform papillae on the apex and lateral borders of the body of the tongue, four rounded vallate papillae on the root of the tongue and foliate papillae on the lateral surfaces of the posterior parts of the lingual body.