

LINGUAL PAPILLAE OF THE NILE HIPPOPOTAMUS (*HIPPOPOTAMUS AMPHIBIUS*)

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Introduction: The available literature provides no entries with descriptions of mechanical and gustatory lingual papillae of the Nile hippopotamus. These issues were more fully studied in research concerning other representatives of Artiodactyla, including domestic swine and bovine. The initial own observations are a completing material in comparative anatomy.

Aim: The aim of this paper was the macroscopic description of lingual papillae in the Nile hippopotamus.

Material and methods: The material for the study was obtained from the City Zoo in Warsaw. The observations were carried out with the use of a operating microscope with integrated video channel.

Results: The description of the tongue includes the description of the root, the body and the apex. A distinctive fan-shaped top of the hippopotamus tongue is worth noting (fig. 1). The described mechanical papillae included filiform and conical papillae. Filiform papillae are located on the dorsal side of the body and apex of the tongue (fig. 2). It was observed that they become shorter and slightly corneous near the midline of the organ. On the ventral surface of the apex of tongue they form a 3-4 cm strip just by its edge. Conical papillae are characterized by varied structure (fig. 4). Long, narrow, sharply ended structures are located near the palatolingual arches. On the border of the body and root of tongue some lower papillae with a broad base and blunt or sharp apices are present.

Among gustatory papillae fungiform and foliate papillae were described. It is worth noting that no structures with morphology characteristic for vallate papillae – papilla shaft and fissure. Foliate papillae are located near palatolingual arches (fig. 3). In their vicinity, some small fungiform papillae were observed. Fungiform papillae are most numerous along the lateral edge of the body and the apex of tongue. They may form concentrations consisting of two or three structures. As in filiform papillae, they are located on the ventral surface of the apex. The papillae have different sizes. The biggest of them were observed in the vicinity of the edge of the tongue body.



Fig.1. Tongue of a hippopotamus (dorsal aspect).
1 – lingual apex, 2 – lingual body, 3 – lingual root



Fig. 3. Foliata papilla

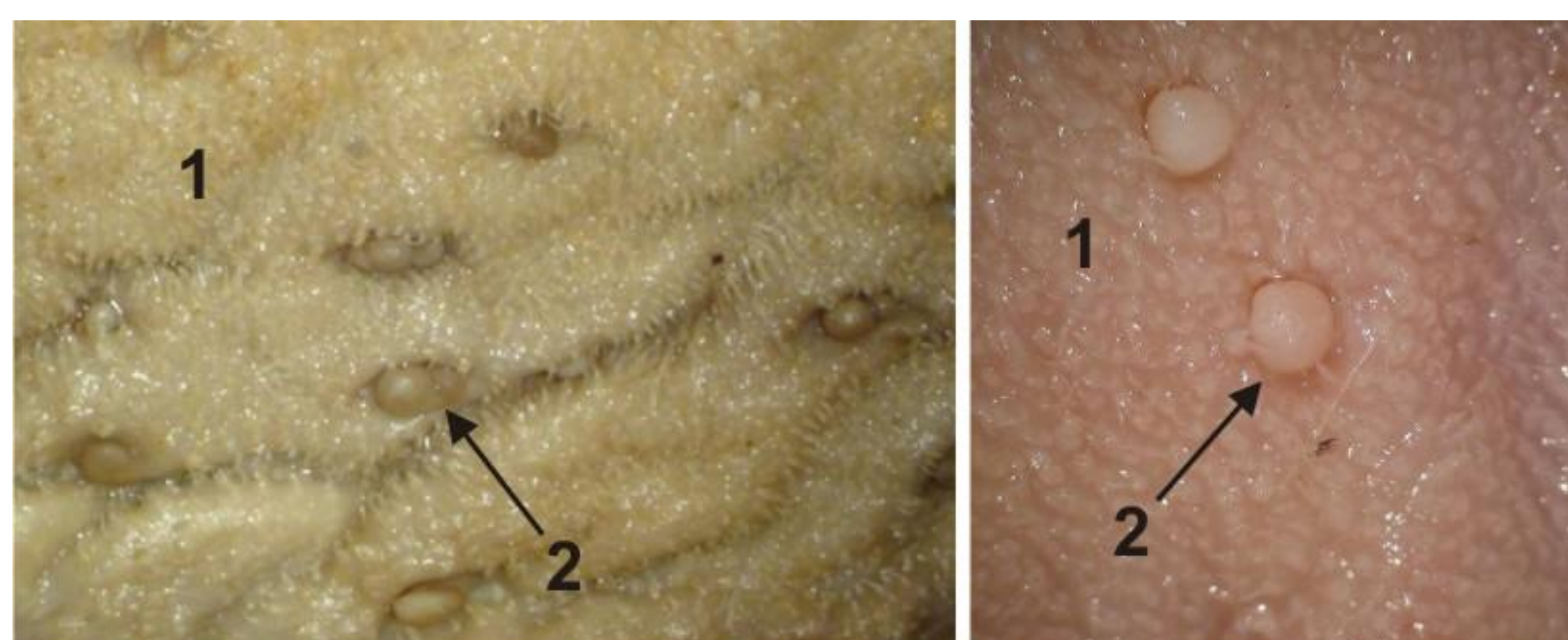


Fig. 2. Papillae of the tongue.
1 – filiform papillae, 2 – fungiform papillae



Fig. 4. Conical papillae