



Gambaran Histologi Lingua *Hystrix javanica*

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INTISARI

Hystrix javanica merupakan salah satu spesies landak endemik Indonesia yang populasinya diprediksi akan terus mengalami penurunan akibat eksploitasi manusia, sehingga perlu digali informasi terkait *Hystrix javanica* untuk mengantisipasi kemungkinan terjadinya kepunahan. Penelitian ini bertujuan menggali informasi struktur histologi lingua serta ketebalan lamina epitelialis mukosae lingua *Hystrix javanica*.

Penelitian menggunakan dua organ lingua *Hystrix javanica* yang berasal dari Tawangmangu, Jawa Tengah. Masing-masing organ difiksasi ke dalam larutan Bouin's selama 24 jam, kemudian dipindahkan ke dalam larutan alkohol 70%. Sampel organ diproses dengan metode parafin, dipotong setebal 5 μm untuk pewarnaan *Hematoxylin-Eosin* (HE) dan *Alcian Blue* pH 2.5 – *Periodic Acid Schiff* (AB pH 2.5-PAS). Ketebalan lamina epitelialis mukosae diukur menggunakan *Image J*. Hasil pengamatan dianalisis secara deskriptif dan kuantitatif.

Lingua *Hystrix javanica* memiliki papila filiformis, fungiformis dan sirkumvalate. Teridentifikasi dua tipe papila filiformis, yaitu tipe tinggi dan rendah, serta adanya gema gustatoria pada beberapa papila filiformis di dorsal. Papila fungiformis tidak memiliki gema gustatoria. Papila sirkumvalate berjumlah dua dan memiliki gema gustatoria. Lamina epitelialis mukosae lingua *Hystrix javanica* berupa epitelium skuamus kompleks berkeratin. Rata-rata ketebalan lamina epitelialis mukosae pada regio *apex* dorsal (1046,201 $\mu\text{m} \pm 362,119$), lateral (344,316 $\mu\text{m} \pm 263,599$) dan ventral (409,243 $\mu\text{m} \pm 224,151$); regio *corpus* dorsal (1276,826 $\mu\text{m} \pm 359,200$), lateral (613,403 $\mu\text{m} \pm 258,183$) dan ventral (311,448 $\mu\text{m} \pm 134,129$); regio *radix* dorsal (1213,741 $\mu\text{m} \pm 514,461$) dan lateral (1063,427 $\mu\text{m} \pm 431,091$). Tela propria-submukosa didominasi oleh jaringan ikat, vasa darah dan jaringan syaraf. Tunika muskularis didominasi oleh jaringan otot skelet yang tersusun acak. Sejumlah glandula serosa dan mukosa dapat ditemukan pada regio *radix* lingua, baik pada tela propria-submukosa maupun diantara jaringan otot skelet pada tunika muskularis. Hasil pewarnaan AB pH 2.5-PAS menunjukkan distribusi mukopolisakarida asam pada glandula mukosa serta mukopolisakarida netral pada ujung papila filiformis dan glandula serosa.

Kata kunci: *Hystrix javanica*, Lingua, Epitelium, Papila, HE, AB pH 2.5-PAS.

Histological Structure of *Hystrix javanica*'s Tongue

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ABSTRACT

Hystrix javanica is one of Indonesia's endemic animals that its population predicted to continue to decrease due to human exploitation. So it is important to documenting the data of *Hystrix javanica* to compensate for potency of their extinction. The aim of the study was to explore the histological structure and a morphometry of *Hystrix javanica*'s tongue.

The study were using two samples of *Hystrix javanica*'s tongue taken from Tawangmangu, Central Java. Each of them was fixed in *Bouin*'s solution for about 24 hours, and then the samples were transferred to 70% alcohol. Samples then were processed by paraffin method, sectioned in 5 μm thick, and then stained by *Hematoxylin-Eosin* (HE) and *Alcian Blue* pH 2.5 – *Periodic Acid Schiff* (AB pH 2.5-PAS) method. The thickness of lamina epithelium mucosae were measured using *Image J* software. Result were analyzed descriptively and quantitatively.

The tongue of *Hystrix javanica* has filiform papillae, fungiform and circumvallate papillae. They are two types of filiform papillae, namely high and short papillae, and some of high papillae having a taste bud. Fungiform papillae has no taste bud. There are two circumvallate papillae which each of them has numerous taste buds. Lamina epithelialis mucosae consist of stratified squamous epithelium with cornification. The average of the thickness of lamina epithelialis mucosae are as follows: *apex* region of dorsal (1046,201 μm \pm 362,119), lateral (344,316 μm \pm 263,599) and ventral (409,243 μm \pm 224,151); *corpus* region of dorsal (1276,826 μm \pm 359,200), lateral (613,403 μm \pm 258,183) and ventral (311,448 μm \pm 134,129); and *radix* region of dorsal (1213,741 μm \pm 514,461), lateral (1063,427 μm \pm 431,091). Tela propria-submucosa dominated by connective tissue, blood vessel and nervous tissue. While the muscularis layer dominate by irregular skeletal muscle tissue. In the *radix* region, some of serous and mucous glands are found in tela propria-submucosa and between skeletal muscle tissues in musculare layer. The AB pH 2.5-PAS showed the acid mucopolysaccharide's are distributed on mucous glands, and neutral mucopolysaccharide's are distributed on top of filiform papillae and serous glands.

Key words: *Hystrix javanica*, Tongue, Epithelium, Papillae, HE, AB pH 2.5-PAS.