

## Microvasculature of the pecten oculi in *Anas platyrhynchos*

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### SUMMARY

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The microvasculature of the duck pecten was investigated using light (LM), scanning electron (SEM), and transmission electron (TEM) microscopy techniques. SEM analysis showed that the capillaries anastomosed between them and formed a basket-like network which covered both the faces of the pecten. As a whole, the pecten vascular cast resembled a sandwich-like structure formed by a double layer of capillaries which contains large vessels (arteries and veins). The capillaries were variable in diameter and shape. They formed a capillary envelopment underlying the superficial membrane of the pecten. Moreover, differently shaped and sized impressions were constantly observed on the capillary casts. Small lymphatic capillaries were also found to accompany the blood capillaries. These lymphatic vessels bridged the blood capillaries of the pleats in proximity of the vitreous membrane. TEM of the capillary endothelial cells showed a very flattened cytoplasm. The plasmalemma of these cells had many microfolds on the luminal as well as on the basal surface. In some cases, these microfolds had enlarged extremities. The morphological characteristics described in the present study suggest that the pecten plays an important role in the regulation of metabolic exchanges between the blood and the ocular nervous tissue, thus, preserving the integrity and stability of the endo-ocular microenvironment.