

ABSTRACT

The morphology of the terminal colon and cloaca was studied in four African ostriches comprising two young males whose organs were fixed *in situ* by gravitational perfusion of 10% aqueous formaldehyde and two other young males whose organs were fixed by immersion in similar fixative. Observations were made by dissection and histological examination of the tissues from the specimens. The part of the ostrich hindgut homologous to the rectum in other birds is known as the colon and it measures about 11 metres from the caeca to the vent. The caudal part of the colon bordering the cloaca consists of the proximal and distal pouches of the terminal colon, which are marked by low annular folds. The cloaca consists of the coprodeum, urodeum and proctodeum. The distal pouch of the terminal colon opens into the coprodeum via the colonicoprodeal sphincter which is formed largely by a prominent infolding of the ventral walls of the colon and the coprodeum. A diaphragm-like coprourodeal fold with a centrally placed aperture demarcates the coprodeum and urodeum. A semi-lunar uroproctodeal membrane forms the roof of the urodeum and has a relatively wide uroproctodeal aperture towards the vent. The cranial part of the proctodeum overlies the urodeum and it has luminal folds of variable size that form the cloacal bursa. On the floor of both the urodeum and proctodeum lies the phallus a short distance from the vent. The ostrich is the only bird that is known to void urine independently of defaecation and the well formed sphincter-like folds that demarcate the cloacal compartments appear to be quite important in the separation of urine from faeces.