

Morphology of large intestine in adult peahens, *Pavo Cristatus*

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Abstract

The current study aimed to investigate the morphological features of the large intestine in adult female peafowl, *Pavo Cristatus*. Therefore, six adult peahen was obtained and their large intestine dissected and examined. Based on the results, it consists of two long ceca and a short colon. The left cecum is longer than the right one. The color of the cecum is different from the colon and the last is found as a straight tubular portion extending to the cloaca. The mucous membrane of the cecum showed tortuous folds while the colon showed a velvet appearance by short finger-like projections.

Keywords: Large intestine, Peahen, Morphology, Morphometric.

Citation: Khaleel, S.J. & Mirhish, S.M. 2022. Morphology of large intestine in adult peahens, *Pavo Cristatus*. Iranian Journal of Ichthyology 9(Special Issue 1, 2022): 180-186.

Introduction

The large intestine in birds is composed of paired ceca and a short straight rectum (King & McLelland 1984; De Golier et al. 1999; Skan 2005). Caeca are two blind pouches representing the main part of the intestine for bacterial fermentation and nutrient digestion and absorption (Saleem 2012). The birds' ceca range in length from very short to very long or absent or approximately equal. The omnivorous, herbivorous, and granivorous species have long ceca, whereas piscivorous and nectarivorous have the smallest one (McLelland 1989; De Golier et al. 1999), with separate lateral or ventrolateral openings into the rectum (Pesek 1999; Hamdi et al. 2013). Herbivorous species with proteins and soluble sugars-rich diets have poorly developed or absent ceca (De Golier et al. 1999). The cecum of birds is morphologically classified into five types, viz. very long and well-developed, long and moderately developed, small, very small to vestigial ceca, and absent. In addition, the ceum may be classified according to its length into long, moderate, and vestigial types (Naik & Domimic 1962; Duke 1986).

The rectum is positioned in the terminal part of the large intestine, originates from the ileocecal junction, and ends to the cloaca, and is suspended by a mesentery (Hena et al. 2012). In chicken, the colon is relatively short extended to the cloaca with the role of water re-absorption (Saleem 2012). The rectum is very short in birds with a small diameter (Cooper & Mahroze 2004; Hewitt 2004). The short colo-rectum in birds retrieve nutrients remaining in the digesta from the ileum, before expulsion from the digestive tract (Adeola 2006). The rectum in herbivorous species has no sacculations for microbial fermentation (Klasing 1999), but ostrich as herbivorous possesses it along with rectum with sacculations along its length (Shanawany 1996; Cooper & Mahroze 2004). This work aimed to study the morphological features of the large intestine in adult female peafowl, *Pavo cristatus*.

Materials and methods

The present study was conducted on six adult peahens obtained from local suppliers in Baghdad Province. The birds were weighed and euthanized