

The mucous membrane of the small intestine is beset throughout with villi, which are mostly conical in form.

The subjoined table shows the length of the small intestine in the different species of Penguin which I have dissected.

LENGTH OF SMALL INTESTINE FROM PYLORUS TO JUNCTION OF CÆCA WITH INTESTINE.

<p><i>Eudyptes chrysocome</i>, from Tristan d'Acunha.</p> <p>No. 1. 11 feet 8 inches. No. 2. 14 feet 8 inches.</p> <p><i>Eudyptes chrysocome</i>, from the Falkland Islands.</p> <p>No. 1. 16 feet. No. 2 (immature). 18 feet 2 inches.</p> <p><i>Eudyptes chrysocome</i>, from Kerguelen Island.</p> <p>No. 1. 21 feet 7 inches. No. 2. 23 feet.</p> <p><i>Eudyptes chrysolophus</i>.</p> <p>No. 1. 21 feet 3 inches. No. 2. 21 feet 4 inches. No. 3. 20 feet.</p> <p><i>Spheniscus demersus</i>.¹</p> <p>No. 1. 24 feet 6 inches. No. 2. 20 feet 8 inches. No. 3 (immature). 13 feet 1 inch.</p>	<p><i>Spheniscus magellanicus</i>.</p> <p>No. 1. 30 feet 6 inches. No. 2. 27 feet 5 inches. No. 3. 19 feet 6 inches.²</p> <p><i>Spheniscus mendiculus</i>.</p> <p>No. 1. 10 feet 7 inches. No. 2. 13 feet.</p> <p><i>Spheniscus minor</i>.</p> <p>No. 1. 6 feet 9 inches.</p> <p><i>Pygosceles tæniatus</i>.</p> <p>No. 1. 11 feet. No. 2. 10 feet. No. 3. 11 feet 6 inches.</p> <p><i>Aptenodytes longirostris</i>.</p> <p>No. 1. 21 feet 8 inches. No. 2. 25 feet 3 inches. No. 3. 17 feet 10 inches. No. 4. 19 feet 8 inches.</p> <p><i>Aptenodytes patachonica</i>,³ Forst.</p> <p>No. 1. 22 feet 6 inches.</p>
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From this table it appears that the length of the small intestine is extremely variable in different individuals belonging to one and the same species, this difference varying in amount from 2 feet in different specimens of *Eudyptes chrysocome*, to as much as 8 feet in different specimens of *Aptenodytes longirostris*. It seems, therefore, that the length of the alimentary canal in these birds is a factor of very small value in the determination of different species. The difference in length most probably depends on the more or less nutritive quality of the food at the disposal of the various individuals which compose a species. It seems not unreasonable to suppose that, just as in the herbivorous mammal

¹ In the specimen examined by Garnot the small intestine measured 6·2 metres in length.

² For this specimen, which died in the Menagerie of the Zoological Society of London, I am indebted to the kindness of P. L. Sclater, Esq.

³ Reid, Proc. Zool. Soc., 1835, p. 148.