diverge from one another opposite the fourth cervical vertebra. The number of cervical vertebræ destitute of hypapophyses, therefore, indicates the extent of the vertebral column with which these arteries are in contact.

The variations in respect of the bodies of the cervical vertebræ in different species are few and unimportant.

In *Eudyptes chrysolophus*, *Spheniscus demersus*, *Spheniscus magellanicus*, *Spheniscus mendiculus*, *Pygoscelcs tæniatus*, and *Aptenodytes longirostris* the fourth cervical vertebra develops a hypapophysis in addition to those met with in *Eudyptes chrysocome* from Tristan d'Acunha. In *Eudyptes chrysocome* from Kerguelen an additional hypapophysis is developed on the ninth cervical vertebra, while in *Aptenodytes*, on the other hand, the hypapophysis of the tenth cervical vertebra met with in *Eudyptes chrysocome* is wanting. In every species of the genus *Spheniscus* the hypapophyses of the lower cervical vertebræ are relatively larger than in those of any other genus.

The *transverse processes* of the cervical vertebræ consist as usual of two bars, an anterior and a posterior, which unite together to complete the foramen for the vertebral artery. The canal formed by the apposition of the different vertebræ for the reception of that artery extends from the third to the thirteenth cervical vertebra, but is absent at the anterior portion of the neck, where, by reason of both atlas and axis being destitute of any transverse process, and consequently of a vertebrarterial foramen, the canal is deficient. The free extremities of the posterior bars form a series of small, rounded, and but slightly projecting nodules from the fourth to the tenth cervical vertebra. In the eleventh, twelfth, and thirteenth vertebræ, on the other hand, these nodules are largely developed, and assume the appearance characteristic of the transverse processes of the dorsal region. Those of the eleventh and twelfth vertebræ are rather smaller than those of the thirteenth, which indeed are of larger size, and more prominent than the transverse processes of any other vertebræ, not excepting those of the dorsal region. Above the fourth vertebra they are scarcely distinguishable. The anterior bars of the cervical transverse processes (cervical ribs) are provided with elongated spines which afford attachment to the tendons of insertion of the longi colli muscles. These spines are well developed from the third to the eleventh cervical vertebra inclusive. In the first and second, by reason of the absence of a transverse process, they are absent, while in the twelfth and thirteenth, although present, they are thicker, shorter, and less projecting than in the vertebræ higher up.

With respect to the variations in the transverse processes, I find that while in all three specimens of *Eudyptes chrysocome*, the nodular extremities of the posterior bars of the cervical transverse processes are distinctly visible from the fourth to the thirteenth vertebra, in every other species, including *Eudyptes chrysolophus*, they are entirely absent in the upper five cervical vertebræ, and only make their appearance from the sixth to the thirteenth vertebra inclusive.

In every species of *Spheniscus*, with the single exception of *Spheniscus minor*, the