

with the skin, they supply. The anterior divisions of the last two cervical nerves pass backwards, and unite with the first dorsal to form the single cord which in the Penguins represents the brachial plexus.

### The Brachial Plexus.

The brachial plexus (fig. 1) is formed by the union of the anterior branches of the last two cervical and first dorsal<sup>1</sup> nerves, and receives a communicating twig from the second dorsal nerve.<sup>2</sup> These nerves pass out from the intervertebral foramina lying between the scalenus muscle above and the lateral muscles of the root of the neck below. They unite together to form a single cord, which escapes from the thorax along with the subclavian artery by passing over the second rib to reach the axilla. As it passes from the thorax, the single cord lies between the supra- and infra-spinatus muscles above, and the pectoralis minor below, and between these muscles it breaks up into branches for the supply of the wing.

Previously to its union with the other nerves which form the single cord of the brachial plexus, the second last cervical nerve gives off certain branches. They are arranged as follows:—

(a) The nerve to the *rhomboid*, *trapezius*, and *levator scapulæ* (1)<sup>3</sup> winds upwards between the shoulder girdle and the wall of the chest, to reach the deeper surface of the rhomboid muscle, where it divides into three branches, which are distributed to the three muscles above named.

(b) The nerve to the *pectoralis medius* (2) passes downwards through the foramen situated on the inner side of the upper extremity of the coracoid bone, and enters the deeper surface of the muscle which it supplies. A subordinate twig is given off from this nerve to supply the coraco-brachialis.

From the single large cord which represents the brachial plexus, the following branches are derived:—

(a) The nerve to the *pectoralis major* (3), which passes downwards, and enters the deeper surface of that muscle. From this nerve a subordinate branch is supplied to the “muscle des parures,” and another to the pectoralis minor.

(b) The nerve to the *serratus anticus major* and *serratus anticus minor* (4). This nerve arises from the plexus, above the origin of the nerve to the pectoralis major. It pierces the serratus anticus minor, and after giving off branches to that muscle, terminates in the serratus anticus major.

<sup>1</sup> By first dorsal nerve I mean that nerve which lies in the intercostal space which is bounded in front by the first or rudimental rib, and behind by the second rib. The designation of this nerve is dependent on the view held regarding the nature of the first or rudimental rib. By some anatomists it is considered to be the moveably articulated transverse process of the last cervical vertebra, while by others it is regarded as the costal element of the first dorsal vertebra. I have adopted the latter view, and consequently enumerate the nerve in question among those of the dorsal region.

<sup>2</sup> The communicating branch from the second dorsal nerve is absent in *Eudyptes chrysolophus* and in *Spheniscus mendiculus*.

<sup>3</sup> The figures in brackets refer to the annexed diagram of the plexus.