anguli scapulæ in *Otaria* and *Trichechus* resembling in insertion the muscle of human anatomy. In all the Phocinæ and the two *Arctocephali* I find there is one with a very similar insertion to that found in man, so there is reason for giving the name atlanto-scapular to the muscle in *Arctocephalus* corresponding to Dr. Murie's levator anguli scapulæ.

In his paper on the *Trichechus* he points out that there is also a muscle which may be the representative of the so-called levator-claviculæ. The atlanto-humeral has the same action as the cephalo-humeral. The atlanto-scapular pulls the scapula forwards and rotates it.

Up to the present there have been differences in the muscles of *Phoca barbata* and *Phoca hispida*, and special descriptions of various points have been required; but now we come to a stage in this myological study where all these agree, with only an occasional difference. It must therefore be remembered that the description of *Phoca vitulina* is also the description of *Phoca barbata* and *Phoca hispida*, and only when a deviation occurs from the one selected as the standard animal will their names be cited.

The VENTRAL THORACIC REGION contains the pectoral muscle. The pectoralis minor and subclavius are absent.

The Pectoral Muscle.—In consequence of the importance of this muscle both in swimming and in moving on land, I have very carefully examined it. It has received numerous names. Vrolik and Humphry call it the pectoralis major, Lucae the pectoralis, and Murie in the *Otaria* the pectoral muscles, whilst in the *Trichechus* he divides it into three—(*a*) a fleshy pectoralis major, (*b*) a second, (*c*) a third layer. It is situated in the pectoral region at its insertion, but the origin is more extensive, for it covers the neck, chest, abdomen, and leg. The panniculus partially conceals it. This most extensive muscle is divisible into three parts—(*a*) the presternal, (*b*) the sternal, and (*c*) the abdominal. The presternal and sternal form one triangle, the abdominal another. The presternal part *arises* from the fascia over the trachea 1 inch anterior to the presternum, and from the side of it. It is separated, close to the junction of the presternum with the meso-sternum, by a very faint cellular line, seen best on the under surface of the muscle. The fibres pass towards the shoulder. The sternal part *arises* from the whole length of one side of the meso-sternum, and from the cartilages of the eleven true ribs, and by an antero-posterior slip from the xiphi-sternum. A cellular interval separates it from the third part. The abdominal part must be studied as three groups of fibres. The first group *arises* posterior to the xiphi-sternum from 3½ inches of the linea alba; the second group, from the fascia over the external oblique muscle, by several finger-like prolongations, which are shortest and most obliquely directed outwards near the middle line. Between these the fibres of the external oblique are seen ascending to the ribs. The third group *arises* from the fascia on the back of the leg. These hindmost fibres rest on the back of the leg, are continuous with the hindmost fibres of the panniculus, turn round the leg, sweep over the femur, touch the outer side of the patella, and course antero-posteriorly with the rest of the abdominal fasciculi, which are obliquely turned outwards. All meet at the axillary border of the sternal part and disappear beneath it. The three parts—presternal, sternal, and abdominal—converge on nearing their attachment to the humerus. They are *inserted* in the following manner:—The presternal part blends with the sternal, and the anterior third of this combination is *inserted* into the inner margin of the deltoid tuberosity of the humerus, with the exception of a small part at the upper end. The posterior two-thirds join the posterior layer of the deep fascia of the forearm, reaching near to the lower end of the ulna on the