

of bone quite separate from the peduncle, transverse process, and superior articular process; but the two laminae, not united mesially and posteriorly into a single spine, were separated from each other by a mesial cleft (fig. 2). In both the Bushman and the male Esquimaux the laminae had united posteriorly into a mesial spine, but they and the inferior articular processes were not fused with the pedicles, so that the posterior part of the neural arch formed a separate piece of bone. The very imperfect spine of a Sandwich Islander, recently presented by Dr. G. W. Parker of Waiaha, Oahu, which is not included in the preceding thirty skeletons, exhibited a defect in the neural arch of the 5th lumbar, similar to that seen in the Bushman and Esquimaux. In one of the Negro skeletons the right half of the neural arch was normal, but the left lamina, with its inferior articular process, had remained distinct and separate from the spine, as well as from the pedicle of its own side. These five specimens show that the laminar part of the neural arch had arisen in them from a pair of ossific centres, quite distinct from the centres from which the pedicles took their origin; and that whilst the inferior articular processes belonged to the laminar part, the superior belonged to the peduncular part of the vertebra. As this condition was only seen in the 5th lumbar vertebra the question naturally arises, does the neural arch of this bone on each side normally develop from two ossific centres, laminar and pedicular, which subsequently fuse with each other, though in these five skeletons they had remained distinct; whilst in the other four lumbar vertebrae only a single pair of ossific centres are formed for the production of both the peduncular and laminar part of the arch. It is known, for instance, that the anterior division of the transverse process (parapophysis) in the 7th cervical vertebra is developed from a distinct centre, which may sometimes acquire the form and dimensions of a cervical rib, whilst the parapophysis in each of the other six cervical vertebrae arises by an extension into its cartilage of ossific material derived from the primary centres of ossification of the bone, so that this process in the cervical series does not develop uniformly in all the vertebrae. It is possible that the neural arch of the 5th lumbar vertebra may normally develop on a different plan from that of the other lumbar, so as to permit of such a separation of the laminar part of the arch as was found in these specimens. The development of the neural arch in this bone is worthy, therefore, of special investigation by the embryologist.

In the General Summary of the characters of the aboriginal Crania described in the First Part of this Report, I pointed out (p. 118) that a larger proportion of important variations from the usually described arrangements occurred in them than would have been found in a corresponding number of the skulls of the white races. With equal truth a similar remark may be made on the variations in the Spinal Column which I have just described. I am not able to state, numerically, the proportion in the white races in which variations in the form of the spinous processes of the cervical vertebrae, the occurrence of a supernumerary vertebra in the dorsi-lumbar region, or the development