

a rough, uneven border, thickest below where it is occasionally notched. The **superior** and **inferior articular processes** are well-defined, projecting respectively upward and downward from the junctions of pedicles and laminae. The facets on the superior processes are concave, and look backward and medialward; those on the inferior are convex, and are directed forward and lateralward. The former are wider apart than the latter, since in the articulated column the inferior articular processes are embraced by the superior processes of the subjacent vertebra. The **transverse processes** are long, slender, and horizontal in the upper three lumbar vertebrae; they incline a little upward in the lower two. In the upper three vertebrae they arise from the junctions of the pedicles and laminae, but in the lower two they are set farther forward and spring from the pedicles and posterior parts of the bodies. They are situated in front of the articular processes instead of behind them as in the thoracic vertebrae, and are homologous with the ribs. Of the three tubercles noticed in connection with the transverse processes of the lower thoracic vertebrae, the superior one is connected in the lumbar region with the back part of the superior articular process, and is named the **mammillary process**; the inferior is situated at the back part of the base of the transverse process, and is called the **accessory process** (Fig. 93).

The **Fifth Lumbar Vertebra** (Fig. 94) is characterized by its body being much deeper in front than behind, which accords with the prominence of the sacrovertebral articulation; by the smaller size of its spinous process; by the wide interval between the inferior articular processes; and by the thickness of its transverse processes, which spring from the body as well as from the pedicles.

The Sacral and Coccygeal Vertebrae.

The **sacral** and **coccygeal vertebrae** consist at an early period of life of nine separate segments which are united in the adult, so as to form two bones, five entering into the formation of the sacrum, four into that of the coccyx. Sometimes the coccyx consists of five bones; occasionally the number is reduced to three.

The Sacrum (*os sacrum*).—The sacrum is a large, triangular bone, situated in the lower part of the vertebral column and at the upper and back part of the pelvic cavity, where it is inserted like a wedge between the two hip bones; its upper part or base articulates with the last lumbar vertebra, its apex with the coccyx. It is curved upon itself and placed very obliquely, its base projecting forward and forming the **prominent sacrovertebral angle** when articulated with the last lumbar vertebra; its central part is projected backward, so as to give increased capacity to the pelvic cavity.

Pelvic Surface (*facies pelvina*).—The pelvic surface (Fig. 95) is concave from above downward, and slightly so from side to side. Its middle part is crossed by four **transverse ridges**, the positions of which correspond with the original planes of separation between the five segments of the bone. The portions of bone intervening between the ridges are the bodies of the sacral vertebrae. The body of the first segment is of large size, and in form resembles that of a lumbar vertebra; the succeeding ones diminish from above downward, are flattened from before backward, and curved so as to accommodate themselves to the form of the sacrum, being concave in front, convex behind. At the ends of the ridges are seen the **anterior sacral foramina**, four in number on either side, somewhat rounded in form, diminishing in size from above downward, and directed lateralward and forward; they give exit to the anterior divisions of the sacral nerves and entrance to the lateral sacral arteries. Lateral to these foramina are the **lateral parts of the sacrum**, each consisting of five separate segments at an early period of life; in the adult, these are blended with the bodies and with each other. Each lateral part is tra-