

The curve from side to side of the outer surface of the carapace is interrupted by three ridges, formed by the increased thickness of the derm, besides the depressions spoken of above, which enter into the form of the body itself. The middle ridge passes along over the vertebral column; it is slight at the front end of the shield, broadest above the first two or three dorsal vertebræ, higher and narrower backward above the sacrum, and then decreases to the hind end of the shield; it occupies the space between the depressions already mentioned. The other ridges are smaller, and situated just outside of these depressions.

The shield is thick, completely ossified, and regularly divided into plates. Besides the eleven pairs of marginal plates and the eight pairs of costals, the usual plates of the vertebral row, with the odd plates at each end terminating the marginal rim, are constant in the carapace. The odd plate and the other marginal plates in front, as well as the first pair of costals, are very large, and give the unusual length and breadth to the carapace in front of the first costal arch.

The plastron is made up of nine plates, as usually, four pairs and one odd one. The second and third pairs reach entirely across, unite with the carapace on each side, and form the bridges and the greater part of the flattened portion of the plastron. The first pair meet in front, and are united by a bony suture, and, reaching backward more than outward, are joined to the second pair by sutures of about the same length. These and the odd plate are large, and give the unusual size to the front part of the plastron. The fourth pair is the smallest, and just underlies the pelvis.

The scapular arch, down to the shoulder joints, is nearly perpendicular. The iliac bones are nearly perpendicular and parallel; their upper ends are very large, and are firmly sutured to the shield above. The ischium too is sutured to the shield below, as also is the pubis. Thus the pelvis is firmly fixed to the shield above and below. This support, together with that of the strong bridges, the thickness of the bony derm generally, and the additional ridges of the carapace, make the shield very firm, in spite of the rather slight curvature of the carapace from side to side.

The ribs extend far out from the vertebræ before meeting the shield, and the space above them on either side of the spinous apophyses is wide as well as high, and affords place for the passage and attachment of very large muscles.

The first dorsal vertebra is turned down at the front end, and its body is much enlarged, so as to present a large, round, articulating surface. Its articulating processes, instead of reaching as usually outward and downward, are placed higher up, near together, and make, with the body of the vertebra, a long, perpendicular axis, upon which the adjoining neck vertebra swings freely from side to side, and but little up and down. This is the prevailing direction of the axis through