

here both carapace and plastron composed chiefly of bony plates resting immediately upon, and firmly fixed to the true skeleton, and united to one another. The only part of the carapace which remains unossified up to adult age is a narrow strip along the ribs near their lower ends, just above the ossified marginal rim, and extending all round except at each end, where a bony plate is interposed. All the ribs, except the first and tenth, reach down to the marginal rim. The eight other ribs have each a bony plate extending from the inner end outward; but these bony plates do not reach the bony marginal rim, or if at all, not till late in life. The first rib rests on the same plate with the second, and so also the tenth with the ninth. Between the inner ends of each pair of costal plates, above the vertebral column, and firmly fixed to it, there is a small plate filling the whole space; the number of these plates varies somewhat, as one or more of the hinder ones is often divided. In front, an odd plate extends from the foremost plate of the vertebral row, and from between the foremost pair of costals to the front end of the carapace, thus entering into the marginal rim, and connecting it with the bony derm above. This plate does not touch immediately any rib or vertebra, but is connected with the isolated true bone situated above the lower neck vertebræ, and the connection is so intimate that they can hardly be distinguished apart. The ninth pair of ribs reaches almost directly backward, passing over the iliac bones, and giving support to the narrow, pointed hind end of the body. Wedged between the plates which are fixed to these ribs, and behind the last of the plates which are fixed to the vertebræ, there is one lying over the sacrum, but free from it; sutured to this there is another behind, and sutured to the latter still another, which last enters into the marginal rim and terminates it behind. The plates of the marginal rim are in one continuous row all round, consisting generally of eleven pairs¹ besides the odd one at each end; two of these pairs are in advance of the first costals. The costal plates are firmly fixed to the ribs and sutured to one another, and those of the vertebral row are firmly united to one another and to the costals, and those which are fixed to the vertebræ are firmly soldered to them; the marginal plates, passing along the ends of the ribs, connect them with one another, and they are themselves connected with the bony derm above by the odd plates at the ends of the carapace. Thus we have a combination of bony derm with the vertebræ and ribs which is well adapted to give strength and stability to the broad, roof-like carapace.

The plastron is connected with the carapace at the lower edge of the marginal rim by unossified corium, and is somewhat movable or rather yielding there, as it also is along its middle line for the greater part of its length. In Sphar-

¹ The scales which cover these plates are not so constant.