be drawn in at all, or only partially, are inferior to the others, or exhibit what may be called *embryonic* characters.[1] This is the case in the Chelonii, which have always been considered as the lowest Testudinata, and, among Amydæ, to some extent in the Chelydroidæ, which stand very low in their sub-order. In all younger embryos the limbs are paddles; they remain paddles in the Chelonii, whilst they are terminated by feet, with more or less distinct fingers, in the Amydæ. We thus have here an additional evidence that the Chelonii are inferior to the Amydæ. There is, however, a remarkable feature in the development of the limbs in Chelonii: the paddles of the young sea Turtle, though identical with those of the Amydæ, differ from what they are in the adult age, and yet they remain paddles. They exhibit, as it were, overgrown embryonic features, such as characterize the types which I have called *hyperembryonic*.[2]

The shield presents similar transformations. At first oblong, and narrower behind than in front, it grows gradually broader, assuming even a circular form. But the characters of the adult are already impressed upon the shield of the Chelonii before it grows very wide; so it is also with the Cinosternoidæ and Chelydroidæ, while in Trionychidæ the flat, roundish form in its fullest expansion is that which the adult preserves. The Emydoidæ have also reached that circular form at the time of hatching, but they afterwards grow again more elongated. The question thus arises, Is there a retrograde development in the Emydoidæ, or not? For my part, I am satisfied that it is not the case. Considering the difference of the elongated form of the Emydoidæ, in which the hind end is generally the broadest, whilst in the elongated shield of the embryo this is the reverse, and considering further the closer relation of the Emydoidæ and Testudinina, in which latter the two ends of the body balance one another so evenly, I believe that the elongation of the Emydoidæ, subsequent to their circular outline, marks a real progress. I consider, therefore, the later widening of the Chelonii, as observed in the adult, as a progressive development, which is attained only late in life in that family; so that it might be said, that, in this respect, the Chelonii do not even reach in old age the form to which the Trionychidæ and Emydoidæ attain at the time of hatching, and at which the Trionychidæ stop, whilst the Emydoidæ take another start in a higher direction, to approximate the form prevailing in the adult Testudinina. A knowledge of the early embryonic changes of the Testudinina is still wanting to carry out fully these comparisons.

I am inclined to consider, further, the presence of keels along the back as characters of inferiority, considering the prominence of these keels in the lowest Chelonii, the Sphargididæ, and their presence in young Chelonioidæ, which lose

[1] Comp. Part I., Ch. 1, Sect. 25, p. 112 to 116.

[2] See Part I., Ch. 1, Sect. 25, p. 116.