there are two of these, one on the outer side for the musculo· spiral nerve, and one on the inner for the median nerve; in other living and fossil reptiles one or other of these may be present. The three bars bounding these two foramina in Sphenodon are sometimes regarded as indications that the humerus contains vestiges of three fin rays in its evolution from the fin of the fish. In the mammals the internal supracondylar (entepicondylar) foramen is most erratic in its appearance and disappearance, very few orders being without some family or genus which shows it. In some mammals, *e.g.* dog, a *supratrochlear foramen* is present just above the trochlea; it transmits nothing. Epiphyses are found in this, as in other long bones, in amphibians, reptiles and mammals, but not in birds.

In the tailless am­phibians (Anura) the radius and ulna are fused, while in the Urodela and reptiles they are always distinct. In some lizards (Iguana, Sρheno- don, &c.) the olecranon epiphysis remains a distinct sesamoid bone just as the patella does, and this is also the case in some bats. In the pronograde mammals the radius is in a position of permanent pronation, and is a much more important bone than the ulna, which is sometimes suppressed, so that little more than the olecranon process remains (e.g. horse, giraffe). In the lower Primates the ulna articulates directly with the cuneiform and (some­times) pisiform bones, and is not shut off from the carpus by a meniscus as in man.

The carpus of the higher vertebrates may be reduced from a gener­alized type by the fusion or suppression of certain of its elements. A perfect generalized type is not known to exist in any vertebrate, though it is very closely approached by the primitive reptile Sphenodon. In such a type the bones are arranged in three rows; proximal, nearest the forearm, middle and distal. There are five bones in the proximal row, which bear the following names, beginning at the outer or radial side of the wrist : (1) *Radiale marginale* (fig. 29, R.M); (2) *Radiale* (R); (3) *Inter­medium* (1); (4) *Ulnare* (U); (5) *Ulnare marginale* (U.M). In the middle row there are two: (1) *Centrale radiale* (C.R) ; (2) *Centrale ulnare* (C.U).@@1 In the distal row there are again five bones, which are spoken of as the first, second, third, fourth and fifth *distalia.*

Sphenodon has all these bones except the radiale marginale.

In many of the urodele amphibians, *e.g.* the salamander and newt (Molge), the carpus is very generalized, the only elements wanting being the radiale marginale, ulnare marginale, centrale ulnare and distale V. In the tailless forms (Anura), however, it is more special­ized, although the radiale marginale is sometimes present and by some morphologists is spoken of as the *prepollex.* When only four distalia are present it is doubtful whether the fifth is suppressed, or whether it has fused with the fourth.

@@@1 In the giant salamander of Japan (Megalo-batrachus) three centralia are sometimes found, so that possibly the generalized carpus should have three instead of two of these elements in the middle row.

In the Reptilia the carpus is often very generalized, as in Spheno- don and Chelydra (see fig. 30).

In the birds the radiale and ulnare are distinct, but the distal bones are fused with the metacarpus to form a *carpo-metacarpus.* In Mammalia various examples of fusion and suppression occur. All that space will here allow is to attempt to show how the human carpus is derived from the generalized type. In man the radiale, radiale marginale, and centrale radiale fuse to form the scaphoid; the semilunar is the intermedium; the cuneiform the ulnare; and the pisiform the ulnare marginale.

The trapezium and trapezoid are distalia I. and II.; the os magnum distale 111. fused with the centrale ulnare; while distalia IV. and V. have either fused to form the unciform, or, as some believe, distale V. has been suppressed.

In some mammals the radiale marginale is very large, *e.g.* mole and elephant, and is regarded as a stage in the evolution of a digit on the radial side of the ρollex, hence named the *prepollex.* In the Cape jumping hare (*Pedetes)* this digit is two-jointed and bears a rudi­mentary nail. Feebler indications of another digit on the ulnar side of the carpus, called the *post*-*minimus*, are sometimes seen in relation with the pisiform, which is therefore no longer regarded as a sesamoid bone, but, with the radiale marginale, as a stage in the progress from a pentadactylous to a heptadactylous manus. The centrale radiale persists as a distinct bone throughout life in many monkeys, as also does the radiale marginale.

In the suppression of digits in vertebrates a regular sequence occurs; the pollex is the first to go, then the minimus, index and annularis one after another, so that an animal like the horse, which has only one digit, has lost all except the medius.

In the mammals the number of the phalanges usually corresponds with that of man, though in the lower vertebrates they are often much more numerous.

When the extremity is modified to form a paddle, as in Ichthyo­saurus and the Cetacea, the phalanges are often greatly increased in number.

In the elasmobranch fishes the pelvic girdle is a repetition of the pectoral though it is not quite so well marked. The acetabulum corresponds to the glenoid cavity, and the part of the girdle dorsal to this is the ilium; the ventral part, uniting with its fellow in the mid-line, is the ischio-pubis, the two elements of which are sometimes separated by a small foramen for the passage of a nerve. When this is the case the anterior (cephalic) part is the pubis, and is in series with the precoracoid, while the ischium (caudad) repeats the coracoid.

In Amphibia the connexion between the ilium and sacrum becomes established, and some of the extinct Labyrinthodontia have separate pubic and ischial symphyses, though in existing forms the ischium and pubis are generally fused.

In the Urodela there is usually a bifid cartilage just in front (cephalad) of the pubes, in the mid-line, which is called the *epipubis* (see subsection on embryology).

In the Reptilia the ilium always projects backward towards the