

A third family of *Prunoidæa*, closely allied to the two preceding families, is the *Spongurida*, in which we include all *Prunoidæa* with an ellipsoidal or cylindrical, unjointed shell, in which the lattice-work of the cortical shell is transformed into an irregular, siliceous framework. In the simplest form, *Spongellipsis*, the simple lattice-shell of *Cenellipsis* is substituted by an external spongy envelope. In other cases (*Spongurus* and allied genera) the whole cavity of this external spongy shell is distended with a fine spongy framework. The subfamily of *Spongodruppida* is distinguished by the possession of a simple or double latticed medullary shell; this lies in the midst of the central capsule, and is connected by radial beams (perforating its membrane) with the enveloping spongy cortical shell. The surface of the latter may bear either radial spines, or two opposite strong polar spines, at the poles of the main axis (Pl. 17, fig. 12).

Closely allied to the *Ellipsida* and *Druppulida* are two other families of the *Prunoidæa*, the *Artiscida* and *Cyphinida*, which differ from the former by a circular constriction in the equatorial plane of the ellipsoidal shell; and in this way assume a characteristic twin form, like a figure of eight. In the *Artiscida* the shell is simple (as in the *Ellipsida*), whereas in the *Cyphinida* it is composed of two or more concentric shells (as in the *Druppulida*). The simplest form of the *Artiscida* is *Artiscus* (Pl. 39, fig. 9), differing from *Cenellipsis* in the ring-shaped, equatorial constriction. In other *Artiscida* polar appendages are developed on both poles of the main axis, either in the form of solid, strong spines (*Stylartus*), or hollow fenestrated tubes (*Cannartus*, Pl. 39, fig. 10).

The family *Cyphinida* differs from the *Druppulida* in the equatorial constriction of the shell, and from the *Artiscida* in the presence of two or more concentric shells. One or two of these concentric fenestrated shells are enclosed in the central capsule (and therefore may be called "medullary shells"); the others (one or two, rarely more) lie outside of the central capsule (therefore "cortical shells"). The internal "medullary shells" are always spherical or somewhat lenticular, compressed from both sides; the external "cortical shells" have constantly a ring-like constriction in the equatorial plane, and "twin-shells" are therefore like a figure of eight. The simplest form of this subfamily is *Cyphanta*, composed of a simple medullary shell and a simple cortical shell, the two being connected in the equatorial plane by radial beams. In *Cyphonium* (Pl. 39, fig. 12) the medullary shell is doubled, and in *Cypassis* (Pl. 39, fig. 13) the cortical shell likewise. On both poles of the main axis strong spines are often developed (*Cyphinus*, Pl. 39, fig. 14), or hollow fenestrated tubes (*Cannartidium*, Pl. 39, figs. 16-19).

The equatorial constriction of the ellipsoidal shell, which characterises the *Artiscida* and *Cyphinida*, is repeated or multiplied in the two following families, in the *Panartida* and *Zygartida*; in the former we find three ring-like strictures, in the latter five or more (lying in parallel transverse planes); therefore the fenestrated shell is composed in the one instance of four chambers, in the other of six or