The genus Spirema begins the series of the Spiremida, or of those Lithelida in which the medullary shell presents a simple latticed sphere or ellipsoid, never composed of a double, trizonal or Larnacilla-shaped shell. In the present state of our knowledge we cannot say whether this simple medullary shell be a primary formation, or effected by secondary means, by reduction of a double Larnacilla-shaped medullary shell, which is constantly found in the Larcospirida. The species of this genus (as of all Lithelida) are difficult to distinguish, are transformistic, and incline very much to variations and abnormalities. The spiral may be simple or double.

Subgenus 1. Spiremarium, Haeckel.

Definition.—Spiral convolutions of the cortical shell simple.

1. Spirema lentellipsis, n. sp.

Cortical shell lentelliptical, with smooth surface; proportion of its three dimensive axes = 4:5:6. In the median plane are visible four perfect turnings of the simple spiral, the breadth of which gradually increases towards the third convolution, finally decreasing; the broadest (third) turning three times as broad as the simple spherical medullary shell.

Dimensions.—Length of the lentelliptical cortical shell 0.18, breadth 0.15, height 0.12; diameter of the spherical medullary shell 0.02.

Habitat.—North Atlantic, Station 353, surface.

2. Spirema melonia, n. sp. (Pl. 49, fig. 1).

Cortical shell nearly spherical, with smooth surface; proportion of its three dimensive axes = 1.4:1.5:1.6. In the median plane are visible three perfect turnings of the simple spiral, all of the same breadth as the simple spherical medullary shell; the breadth of each convolution somewhat greater at the poles of the principal than at the poles of the sagittal axis.

Dimensions.—Length of the shell 0·16, breadth 0·15, height 0·14; medullary shell 0·018. Habitat.—Pacific, central area, Station 271, surface.

3. Spirema flustrella, Haeckel.

Flustrella haliomma, Ehrenberg (1861), Abhandl. d. k. Akad. d. Wiss. Berlin, 1872, p. 293, Taf. ii. fig. 6.

Cortical shell egg-shaped, with thorny surface; proportion of its three axes = 4:5:6. In the median plane are visible three perfect turnings of the simple spiral, the first and second of about the same breadth as the simple spherical medullary shell, the third suddenly increasing, and finally three to four times as broad. Network of the surface irregular, with roundish pores.

Dimensions.—Length of the shell 0.2, breadth 0.17, height 0.14; medullary shell 0.013.

Habitat.—North Atlantic, Greenland, 1000 fathoms, Ehrenberg; Færöe Channel, John Murray.